THE physical therapy REVIEW

35th Annual Conference
American Physical Therapy Association
Olympic Hotel Seattle, Washington
June 15-20, 1958

Attitudinal Deformities of the Lower Extremities in Small Children — WALSH and HOUTZ

Physical Therapy in Geriatrics — JOHNSON

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Volume 38, Number 3 **March 1958**

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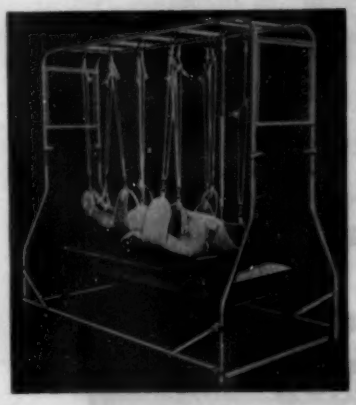

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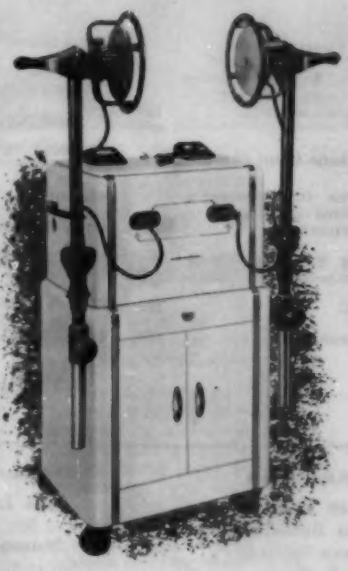

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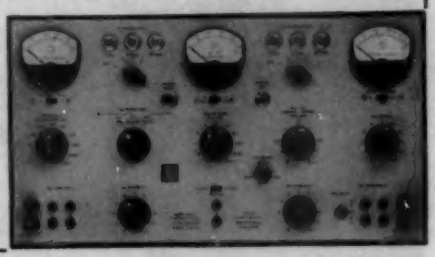

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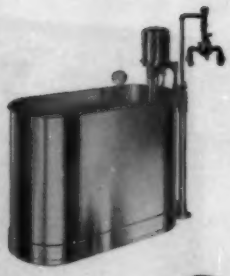

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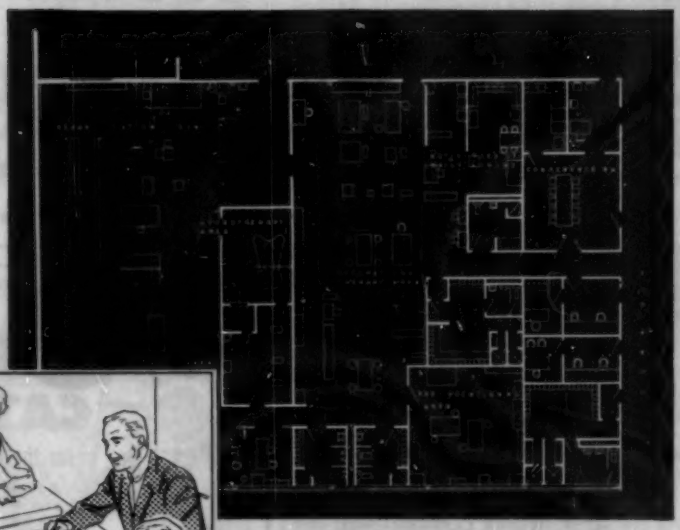

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Postgraduate Course in Technics of Treatment	Children's Rehabilitation Institute for Cerebral Palsy Reisterstown, Maryland	Christopher H. Wiemer Executive Director Children's Rehab. Inst. Reisterstown, Maryland	Apr. 7 — June 20, 1958 July 7 — Sept. 19, 1958 Oct. 6 — Dec. 19, 1958
Developing Concepts in Community Rehabilitation Services	Institute for the Crippled and Disabled	Marguerite Abbott, Dir. Professional Education Inst. for Cr. & Dis. 400 First Avenue New York 10, New York	June 2 — 20, 1958
Principles of Rehabilitation	University of Pennsylvania & U.S. Office of Vocational Rehabilitation	Rehabilitation Center Hosp. of the U. of Pa. Philadelphia 4, Pennsylvania	April 7 — 11, 1958
Neurophysiological Bases for Rehabilitation	University of Penna.	Coord., Special Courses Sch. of Auxiliary Med. Services, U. of Pa. 215 South 34th Street Philadelphia 4, Pennsylvania	April 14 — 25, 1958
Principles and Practice of Geriatric Rehabilitation	Dept. of P.M.&R., N. Y. Med. College—Metro. Hospital Center	Jerome S. Tobis, M.D. N. Y. Medical College 1 East 105th St. New York 29, N. Y.	April 21 — May 2, 1958
Technics of Neuromuscular Reeducation	California Rehabilitation Center Vallejo, California	Margaret Knott Chief P. T. Calif. Rehab. Center Vallejo, Calif.	January 1 April 1
Therapeutic Exercise	University of Colorado Office of Postgrad. Med. Ed.	Jerome W. Gersten, M.D., Head, Dept. of P. M. & R. U. of Colo. Med. Center 4200 E. 9th Ave. Denver, Colo.	May 8 — 9, 1958
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Rehabilitation of the Child Amputee	Mich. Crippled Child. Comm. & Mary Free Bed Children's Hosp. and Orthopedic Center	M. I. Lineberger, Cl. Sup. Area Child Amp. Program 920 Cherry Street Grand Rapids, Michigan	May 1958 (Day to be announced later)

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The Physical Therapy Review

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Attitudinal Deformities of the Lower Extremities in Small Children*

Frank P. Walsh, M.D., and Sara Jane Houtz, M.S.

There is little in contemporary literature about dynamically acquired or posturally induced deformities in small children. Such deformities are seen in children who, when they were examined at the time of delivery, were declared to be free of deformity.

The family physician or pediatrician who later sees these children is, I believe, often at a loss as to what advice to give the parents. Should he say the child will outgrow the tendency, should he avail himself of simple measures which he can advise, or should he refer this patient to an orthopedic surgeon?

The purpose of this presentation is to outline the deformities as encountered, the manner of their occurrence, and to suggest a method for their management.

The five most common tendencies are seen in 1) the small child whose forefeet adduct or "turn-in," 2) the walking child who toes in, 3) the walking child who toes out, 4) the infant who turns one leg in and the other out, and 5) the walking child whose legs "twist in" and give an optical illusion of bowleg.

The first has been called metatarsus varus, but the qualifying term "attitudinal" should be added. When seen early in life there usually is no fixed deformity of the forefoot, it merely adducts dynamically (Fig. 1). Passively, the foot having a tendency toward an attitudinal deformity can be corrected readily and completely. Unlike true metatarsus varus, there is no prominence of the base of the 5th metatarsal or thickening of the other metatarsal bases. Adduction of the forefoot occurs most commonly in infants who sleep on their faces in the fetal position with hips and knees flexed and the weight of the lower trunk resting on the outer border of the foot. This molds the forefoot to an adducted position and, if not corrected, there is a good likelihood that this may become a fixed deformity. Accordingly, as long as the feet can be passively corrected, the situation can be handled by having the infant wear a pair of neutral last shoes while sleeping until the postural habit is discontinued spontaneously. It is our feeling, that to attempt to change a child's sleeping habits too quickly merely frustrates the baby and upsets the parents. Children having fixed deformities require molding plaster casts and then protective shoes.

Before considering the child who either toes in or toes out when he first begins to walk, a review of normal anatomical development should be made. It is relatively well known that in the fetus at the thirteenth week, the degree of anteversion of the femoral neck is about 60 degrees, and when the hips are flexed the lateral rotation approaches 90 degrees. When they are extended there is about 20 degrees of medial rotation. No more lateral rotation is possible because the anterior capsule of the hip joint has become tight. Torsional strain imposed on the anterior joint capsule

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Figure 1. Left, dynamic adduction of the forefoot; right, passively corrected.

which, with growth and molding, influences the degree of anteversion and spontaneously reduces it to the normal 5 to 10 degrees. The range of internal and external rotation present in most normal children is about 45 degrees; this gradually changes as maturity is approached until lateral rotation exceeds internal rotation.

With normal anteversion of the hips present, again the child who sleeps on his face, may accentuate a tendency to toe in. If the child trips himself, he presents a problem; if he does not, he can be left alone. If it is desirable to give the parents something tangible as treatment for the child, tarsal wedges may be placed on the shoes; but at the same time the wedges tend to produce planus and valgus foot posture and this should be prevented by longitudinal inserts inside the shoes. Passive stretching to increase the range of external rotation will not harm the child and will keep the parents busy.

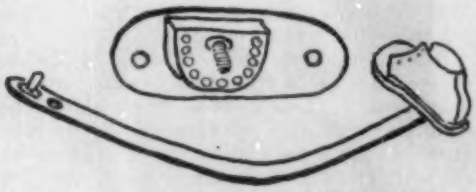

Figure 2. Derotation bar and enlarged plate which is attached to the sole of the shoe. The bolt is attached to the bar by a winged nut. The peg on the bar is inserted into one of the holes on the plate, depending on the degree of inversion or eversion desired.

The method for managing the child who trips himself is not a new one, but a modern utilization of a splint originally designed for use in the treatment of club foot by Dr. Henry Neill in Philadelphia in 1825, and more recently popularized by Denis Browne in 1931. It is called a derotation bar. A pair of shoes are fixed to a crossbar with provision for changing position as to rotation of the shoes. This splint is worn at night (Fig. 2). The child's feet are placed in neutral position and then range of external rotation is gradually increased. The splint is not difficult for the child to tolerate and within a matter of a few months, in some instances a few weeks, the range of internal and external rotation may become a more normal one (Fig. 3).

The splint can usually be discarded, except with the child who does not readily change his sleeping posture, then the splint may be used again for a short time.

Almost always the child who toes out will be found to be a face-sleeper. If the range of external rotation is severe because of the compensatory planus and valgus foot posture it creates, the child's feet should be protected with inserts in his shoes during waking hours and at night the bar should be used in reverse. A disconcerting calcaneovalgus deformity may accompany this hip posture pattern, and if so that should be corrected passively by using molding plaster casts and then in-flare last shoes (Fig. 4 and 5).

Occasionally a child is seen who toes in with one foot. Again, this is a child who sleeps prone but with one leg turned in and one out and he consequently develops or acquires a fixed attitude

Figure 3 (above). Left, maximum hip inversion; right, maximum passive hip eversion. This demonstrates excessive eversion.

Figure 4. Sleeping postures which tend to cause attitudinal deformities. Above, attitudinal metatarsus varus; below, external rotation of the hips with compensatory planus and valgus foot.

Figure 5 (below). Left, maximum passive eversion; right, maximum passive inversion. This demonstrates excessive inversion.

Figure 6. Anterior view of lower extremity with hip and knee flexed to 90 degrees. Deviation of the leg from illustrated line indicates torsion of the tibia.

with dissimilar rotation of the two hips. This problem may also be well managed with a bar.

Lastly, tibial torsion and rarely femoral torsion are not common in children and this postural attitude is an accommodation to fixed internal rotation of the hips. These children walk with their knees partially flexed and then will acquire compensatory external rotation of the tibia in order to keep the feet pointing straight ahead. To determine whether tibial torsion is present, the child is placed on his back, the hip and knee flexed to 90 degrees; with the child in this position a line is drawn from the anterior superior spine through the middle of the patella. In a normal child it should terminate between the first and second toes (Fig. 6). Any external deviation from this point becomes rather obvious. Infants having this problem will always respond well to the use of the derotation bar.

SUMMARY

In brief, we covered posturally-induced, attitudinal deformities which may be encountered in small children. An explanation of their types, a method of control, and its modifications have been presented.

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Physical Therapy in Geriatrics*

Geneva Richard Johnson, B.S.

It is well known that great strides have been made in the past 15 years in saving and prolonging life. With this increase in longevity, we are finding a shift in our patient load in the general hospital. The older patients, who are more susceptible to illness or injury, use a large percentage of hospital beds. The professional nurse and her assistants have a staggering load and often provide bedside care that encourages the older patient to become completely dependent.

A physical therapy program for the aged will have several clearly defined goals, viz.; (1) preservation of the dignity of the individual, (2) achievement of maximal possible function and independence, (3) return of the patient to usefulness in the home and community, if possible. Achievement of these aims will require the cooperation and understanding of all personnel responsible for the patient's care.

Ideally, a treatment program should begin immediately after onset of illness or injury. It may be limited to proper positioning, support of paralyzed or weakened extremities, and gentle passive range of motion. Prevention of deformity, maintenance of strength and range of motion, at this stage, will greatly simplify later rehabilitation procedures. As soon as the patient's condition is stabilized, he should be expected to do everything he can for himself. Bedpan and urinal training should begin as soon as the patient is conscious. If he is allowed out of bed, a bedside commode may be more comfortable and requires less effort to use than the bedpan. In general, the sooner the older patient gets out of bed, the fewer problems his condition will present. Dr. Charles H. Mayo has said, "Long ago I learned from my father to put old people to bed only for as short a time as was absolutely necessary, for they were like a foundered horse, if they got down it was difficult for them to get up, and their strength ebbed away very rapidly while in bed."

At the present time, we are far from the ideal situation in most hospitals, nursing homes, city, county, or state institutions. The type of patient we see is one who has been hospitalized for a period of time as a life-saving measure. He may have been moved to a nursing home or to his own home with no hope that he will be useful again. His life has been saved but he has deteriorated mentally as well as physically. His outlook is bleak. Regaining his place within his family unit and within the comunity seems unlikely. He may appear to hover between consciousness and unconsciousness, refusing to accept the reality of his condition. He may be belligerent, domineering, fault-finding, demanding, and uncooperative. In addition, he may be incontinent by habit and/or loss of muscle tone and strength. Usually he will be frightened by what has happened to him and apprehensive about what else will happen.

In spite of this dismal and unpleasant picture, the patient's condition is usually far from hopeless. If he is approached firmly, but with kindness and cheerfulness, the results of a well planned treatment program will be gratifying. Long range planning should be realistic and the patient should be allowed to participate in this planning, if he is able to do so.

All modalities regularly utilized in a treatment program can be used for the aged, if applied with discretion. Length of the treatment period should be carefully controlled and the patient should be observed for indications of fatigue or stress. Signs of fatigue which may be easily noted are a change in pulse rate, rapid, shallow breathing, pallor, flushing, sweating, or tremor. Frequent rest periods should be allowed the patient, particularly in the beginning, so as not to push him beyond the limits of his endurance.

Graded exercises, beginning with simple range of motion and progressing to carefully supervised progressive resistive exercise, can be used. Early wheel chair ambulation is beneficial for strengthening of the trunk and upper extremities. Push-ups in the wheel chair should be started early, especially if crutches will be used for ambulation. Breathing exercises to increase vital capacity and, therefore, tolerance to activity, should begin while the patient is still in bed.

Training for functional activity should begin early, with those involving hygiene being started first. Instructions for changing handedness, or

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developing one-handed activities can be started while the patient is still in bed. More strenuous functional activities should begin as soon as the patient's strength increases adequately to warrant it. Exercises should have a purpose and this should be made known to the patient. For example, exercises for external rotation of the upper extremity are necessary so that the patient can comb his hair, wash his neck and ears, put on his clothes more easily. As goals are achieved, they should be noted and the patient should be given recognition for his accomplishment.

During the early treatment period, the use of a standing table, or board, will be valuable in helping the patient to adjust to the upright position. Additional benefits derived will be the stimulation to long bones and to the proprioceptive mechanism, increased circulation, diminution of osteoporosis, and prevention of kidney stones. Early ambulation is, also, highly desirable for these reasons.

Transfer from the standing table to full, or partial weight-bearing, in the parallel bars will be made easily. For the patient who will need crutches, standing and balancing should be well established in the parallel bars; however, prolonged use of the bars should be avoided. As quickly as possible, the patient should be shifted to crutches for standing and balancing. Gait training in parallel bars is not recommended as the change from the stability of the bars to crutches creates new fears that the patient must overcome.

The aged patient will require constant encouragement and praise for his smallest achievement. With each advance, it may be necessary to help the patient to evaluate his progress in terms of his previous performance. Emphasis should be on accomplishments and on the compensation which he has made for his disability.

If the disability suffered will be permanent, the therapist can help the patient to understand and accept the limitations imposed by it. When the medical problem has been resolved, the therapist should emphasize to the patient that he is not ill, even though the disability may be limiting in specific ways. A display of confidence in the patient's ability to perform will encourage him to attempt new activities.

Plans for a maintenance program will need to be considered before the patient has reached maximum benefit from treatment. No matter where the patient will live, following the termination of treatment, it will be necessary for those around him to understand his needs, capabilities, and endurance. He will need freedom to use the independence he has achieved. During the long-range planing, thought must be given to allowing the patient to develop skills and interests for pleasure. Motivating the patient to action, and then, failing to provide activities to challenge his abilities will result in a return to pretreatment level very quickly.

To work effectively with the aged patient requires patience, understanding, firmness tempered with kindness and affection, a cheerful disposition, a sense of humor, and the ability to accept and evaluate small gains made by the patient. The older patient has a greater need for encouragement, for praise, and for reassurance that he is progressing satisfactorily.

Emphasis of a treatment program should be on achievement of maximum function. The imaginative therapist can provide a stimulating and productive program at a minimal cost. Happy surroundings and sincere interest and understanding of the treatment goals by all personnel, professional and nonprofessional are the most important factors in establishing and maintaining a successful program.

It has been found that older people tolerate a vigorous program if it is scaled to their limitations. Over-all results will be influenced by the severity of the patient's physical disability, the length of time since onset, the cardiac and respiratory status, the patient's attitude, his family's attitude, and his tolerance to activity. As one 70 year old lady put it, "This old frame is like an old wagon that's held together with baling wire. It will do fine for a light load but it can't haul the heavy load without breaking down."

Law for Physical Therapists

Helen Creighton, A.M., J.D.

Part V. Malpractice

Medical practice acts and physical therapists

At this point, it seems pertinent to discuss malpractice. The question arises where does the practice of physical therapy or the limited auxiliary practice of medicine end and the practice of medicine begin? As the profession of the physical therapist has developed, certain procedures pursuant to a physician's or surgeon's prior diagnosis and prescription and carried out under his supervision have become accepted functions of the physical therapist. In determining whether a physical therapist is "working within the authority of his license, where licensure is required or in any event within his scope as a limited practitioner of physical medicine" when he performs a stated procedure, the courts have based their decision upon prevailing practice. Do qualified physical therapists generally perform the stated procedure? (At law the burden of proving any particular issue in the dispute is upon the party who asserts that issue.) Do physical therapists do so under medical direction and supervision? Do physical therapists do so on medical direction alone? Moreover, and this seems a most important guide for the physical therapist, prevailing practice is grounded on prevailing medical public opinion.

In order that the statement "prevailing medical public opinion" be more accurately understood, perhaps I should remind you that in the law this has reference to medical public opinion as it is expressed in various statutory enactments; for example, Medical Practice Acts or in the cases decided by the courts.

Again, your attention is invited to the malpractice action against the licensed physical therapist previously discussed under licensure. There evidence tended to show that he treated a complaining witness for rheumatism or at least her complaint without the supervision of a duly licensed physician or such physician's written prescription. In a prosecution for illegal practice of medicine the court held that the statute did not authorize one who was licensed to practice physical therapy to make examinations of patients and report the results to a licensed physician over a telephone and to act on such physician's verbal instructions until he arrives.[16]

Another illustration of the unlawful practice of medicine which also shows how one can progress into such difficulty is a Missouri case where X was employed on a full time basis by a doctor who specialized in the treatment of venereal disease in men. At first X was a bookkeeper, then he became a technician, and somewhat later he received and examined patients in the doctor's office, made diagnoses, treated them, and accepted fees for the doctor. X did this without the doctor's immediate supervision and at times when he was not in his office. Such acts of X were considered the practice of medicine which without a license is unlawful.[17]

In considering the above type of case the physical therapist should realize that his professional liability insurance cannot under the law protect him against a charge of violating the medical practice act since such a violation is a criminal action. The law does not allow insurance against a criminal action.

The preceding paragraphs were presented with some reluctance, first because the writer feels that such malpractice suits involving physical therapists are the exception. Granted that among physical therapists as indeed in every profession, a few go beyond the limits of good taste and more specifically their limits as demarcated by the law and hence involve themselves and others in difficulty, the great proportion of conscientious and able members do not. Secondly, the writer hesitated to discuss the relatively uncommon type of action lest it detract from the type of malpractice suit which the average physical therapist is much more likely to face and for which he has real need of professional liability insurance.

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The author has prepared a series of brief articles which present several aspects of law as it applies to physical therapists and their profession. The series is appearing in the January through April issues of the *Physical Therapy Review*.

Malpractice

Malpractice has been defined as any professional misconduct, unreasonable lack of skill or fidelity in professional or judiciary duties, evil practice, or illegal or immoral conduct.[18] I call this matter to your attention because your *January, 1957, membership newsletter* carried an able and informative article on professional insurance and stated: "Every wise physical therapist should carry professional liability insurance."[19]

Since the physical therapist in his work is closely associated with the doctor and since malpractice suits are numerous, if the physical therapist understands the nature of the usual problem and the acts that give rise to the suits, he may cooperate better with physicians and others in minimizing the problem. Complete and accurate records on the patient—his activity, progress, and response to the prescribed therapy—are most helpful and important.

Practical suggestions for minimizing the problem

The physical therapist should bear in mind that generally malpractice suits come from patients who have poor results from treatment. A friendly patient who feels that physical therapists, doctors, and other members of the health team have done their best for him is not the one likely to sue. Hence, the need for tactful handling of patients who are dissatisfied with their care and progress should be evident to the physical therapist. Since the physical therapist frequently spends more time giving care to the patient than the physician, his handling of the patient and his family is of great importance: the way the physical therapist relates to these people may make the difference between a suit or nonsuit against the physician and himself. In discussing this topic, one recent writer gave seven ways by which other members of the health team can contribute to lessening suits:[20]

1. Is always polite to patients regardless of circumstances.
2. Does not discuss the patients' ailments with them.
3. Does not discuss the respective merits of various forms of therapy.
4. Never prescribes.
5. Does not discuss other doctors with the patient.
6. Keeps a record when the patient does not return as directed.
7. Is alert to hazards.

The physical therapist who observes such rules in his work will certainly minimize malpractice actions not only against a physician but against himself. Carrying malpractice insurance is advisable. The cost is small for the physical therapist. You hope you will never have to use it, but you can sleep knowing you are protected.

Some things not to do are illustrated by the following malpractice action against a physician. The plaintiff at the suggestion of the physician submitted to a diathermic treatment by an employee of the physician. After adjusting the electrodes upon the plaintiff's body, the employee left the room. After some time she rushed back into the room and exclaimed, "My God, you look as though you are about to pass out, I forgot all about your being here." She switched off the current and removed the electrodes. Plaintiff recovered damages for the burns.[21]

A second illustrative case is perhaps useful. Plaintiff, an employee of the Ford Motor Company, received treatment for a headache in the company's first aid department; as a result thereof, Plaintiff alleged he sustained serious injury and brought suit for damages. In the first aid department a Swedish masseur, L was employed. The same department also employed Dr. H under whose direction L rendered his services. One day Plaintiff had a severe headache and went to Dr. H who directed him to report to L for treatment. Plaintiff followed Dr. H's directions and received treatment from L which he claimed resulted in physical injury: either total or partial loss of eyesight, and this in turn interfered with his ability to continue working in his job. Excerpts of the testimony are quoted:[22]

(With respect to his treatment Plaintiff testified):

A. He [L]got on the right side, and he caught hold of my head and in such a way, and he gave me a quick jerk....

Q. What did he do then? A. Give me a quick jerk toward the right.

Q. Was it a hard jerk? A. Terribly hard.

Q. What was the result of that jerk? A. The result, I feel at once a change in my whole body, a terrible change.

Q. Can you describe to the jury just what that change was, how you felt? A. I felt terrible dizziness and numbness, spell was terrible, that I could hardly stand any longer there, terrible feeling all through my body.

Q. (directed to L) In treating the Plaintiff, did you ever practice by taking hold of his chin and head and twisting it violently? A. No, sir.

Q. Does that come within the practice of a Swedish masseur? A. No, sir.

Q. Just what does your work cover? A. Cover, by manipulation, massaging, loosening up congestion, and stimulating the circulation.

[L denied treating the Plaintiff in the manner claimed by the latter. The court stated that it thought it was a fair inference from L's testimony that such treatment if given by a masseur was improper.]

Q. Do you twist the different limbs and the body?
A. No.
Q. Suddenly twist them? A. No....
Q. Are you familiar with the general practice of masseurs in this community in the treating of slight headaches? A. Yes.
Q. What is the treatment? A. Well, it is manipulation, back of the neck, the muscles.

This particular action was an appeal from a judgment for defendant Ford Motor Company and defendant L. The Court affirmed a judgment for the Ford Motor Company but vacated a judgment and ordered a new trial as to defendant L.

While the case involved a Swedish masseur rather than a physical therapist, it nevertheless presents a picture of an action which did arise and some inkling of what it means to be a party to such controversies.

Implications for physical therapists

What are the implications for the physical therapist in this problem of personal professional liability? A physical therapist should see that he is personally protected. For such protection the physical therapist should carry malpractice insurance to cover possible damage claims and, in any case, the cost of expert legal protection. More than one physical therapist has had to prove in court that he was not negligent in given action. And need I remind you that your legal defense even where you successfully refute charges of negligence or malpractice, still is a bit costly? Moreover, the physical therapist should realize that an employer's malpractice insurance seldom includes the personal professional liability of the physical therapist.

Physical therapists should reflect on matters of negligence and malpractice: the possibility of claims for damage and such actions as have arisen in the past. After such careful, serious consideration of the problem, in all likelihood the question is not so much: Is it wise to carry personal professional liability insurance? But rather, the question becomes: Honestly can I afford to be without such protection as personal professional liability insurance?

Next issue: LIABILITY OF EMPLOYEE AND LIABILITY OF EMPLOYER.

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Case Report

A Severed Brachial Plexus with Good Recovery

Barbara Kimball, B.S.

A 9 year old white male fell through a storm door while playing on the afternoon of May 12, 1955. The lacerations about the axilla severed all the axillary branches of the brachial plexus distal to the axillary (circumflex) nerve in the left arm. The patient was given emergency treatment in a small town. Within the month he was placed under care of the family physician, who in turn immediately referred the case to a surgeon in Salt Lake City for further treatment.

When examined by the surgeon on June 21, 1955 the boy stated that he had felt no pain at the time of the accident, but had immediate numbness and paralysis. The surgeon admitted the boy to a hospital preparatory to surgery. The patient was referred to physical therapy by the surgeon on June 22. At this time a preoperative muscle test was performed in the outpatient clinic. Power around the scapula and shoulder ranged from fair plus (3+) to good plus (4+). The arm muscles tested zero (0) throughout.

Surgery performed on June 28 included removal of all scar tissue in the axillary area plus location of the loose nerve ends and their preparation for suturing. Placing the arm in adduction made it possible to approximate the nerve ends without placing stress on the nerve trunks. Suturing of the perineural tissues was done. After closure of the wound, the arm was dressed and bound to the side of the body with the wrist held by a simple sling.

The patient was discharged from the hospital on July 7. On July 11, two weeks postoperatively, a prescription for daily passive motion to the hand and wrist was given. The hand position was one of extension at the metacarpophalangeal joints, flexion of the interphalangeal joints, and flexion and ad-

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duction of the thumb. One week later electrical stimulation (galvanization) was prescribed. As the tissue healed and the bandages and bindings were removed, the area being treated was increased, always using passive motion and electrical stimulation. Warm soaks were given at the beginning of each treatment. The parents were instructed as to what should be done at home in the way of exercise to supplement the daily treatments at the clinic.

These procedures were continued with a few minor changes which provided variety for the patient. On August 18, a trace of power was suspected in the triceps. Within another week some return of power in that muscle was certain. Within the next month the biceps began to respond. With return of function to these muscles active exercises for the elbow were initiated. Shortly after the biceps muscle responded there was evidence of return in the wrist flexors. By early December, power in the elbow and wrist flexion was fair (3) to good plus (4+), supination was fair (3).

On December 8, the patient could extend his wrist to neutral from a pronated position. In April, 1956, the finger extensors evidenced a flicker of motion. Further return of function was noted in May when action of the opponens also became evident. In order for the patient to perform these two motions it was necessary for the physical therapist to stabilize the wrist and hand.

From May, 1956, to the present time there has been steady improvement in the power of the flexor muscles involved. Extension of the wrist remains fair (3), and finger extension is trace (1) to poor minus (2−). The intrinsic muscles of the hand were not yet functioning.

Because of the inequality of power and function, two braces were tried. An aluminum brace, first fitted in February, 1956, maintained the fingers in extension by means of rings dropped from a bar over the dorsum of the hand. This brace was not satisfactory because it caused sores on the patient's hand. The pressure required to counteract the muscle imbalance was too great to be tolerated by the hypersensitive skin. The second brace tried was a leather glove-type support with metal bars reaching from the dorsum of the hand down over the back of the fingers. The bars were held in place by the glove fingers. This brace replaced the first one in October, 1956. The glove brace was ineffectual, mainly because the patient would not wear it.

Improvement in sensation coincided with the improvement of muscular power. In late 1956 there was some sensory response over all areas of the hand. At the present time however, there is still 15 to 20 per cent deficiency of sensory response regarding pain, touch, and proprioception.

Although the patient has good sensation of the areas supplied by the radial nerve, the radial innervated muscles have not responded as well as other muscles. It is planned that in the future muscle transplants will be considered.

This case represents what can be done both surgically and therapeutically to restore function following serious peripheral nerve injury and repair. This patient will continue treatment, and it is hoped he will have a functional hand.

Suggestions from the Field

A Device for Buerger's Exercise

John L. Echternach, B.S.

This apparatus for Buerger's exercise was designed to fill the need for a lightweight, portable piece of equipment for use in the ward. Previously, ward patients had been instructed to use a chair turned upside down to aid them in Buerger's exercise, but this seemed to be a deterrent to their exercising as frequently as necessary.

Materials and construction (See Fig. 1)

Two pieces of ½ inch plywood, 18 inches wide and 40 inches long, are joined together at one end by 3 hinges; the other end is separated by a stand which is hinged to the top piece of plywood. This stand which is 4 inches wide holds the top to the bottom section at a 45 degree angle. A piece of plywood, 4 inches by ¾ inch attached to the bottom section braces the stand when in use.

This easily constructed device can be used in the patient's home after discharge from the hospital and is conveniently stored in a crowded clinic.

Materials cost approximately $8.00.

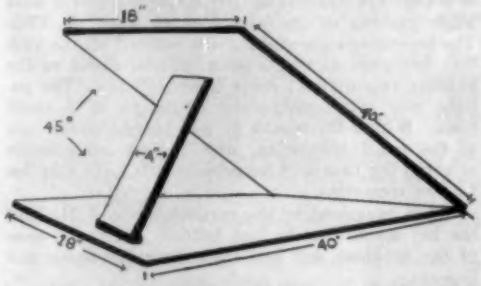

Figure 1.

Senior Assistant Therapist, United States Public Health Service Hospital, Baltimore.

Shoulder Exercise Wheel

Elizabeth J. McClusky, B.S.

Physical therapy of the shoulder with limited motion due to bursitis, adhesive capsulitis and periarthritis is commonly prescribed. The treatment of this condition poses the problem of how to increase scapulohumeral motion. Equipment used in this treatment, such as finger ladders, wall wheels, and overhead pulleys, can be helpful in isolated planes of motion, but have not offered all that is to be desired. Therefore, a wheel with a tilt angle and rotation cuff has been devised and is presented as a device for physical therapy of the shoulder with limited motion. This wheel is advantageous in that it offers motion in combined planes through the various angles of abduction, external and internal rotation, and flexion and extension. Thus the Shoulder Exercise Wheel helps to stimulate the normal ranges of motion of the shoulder.

The wheel, 34 inches in diameter, is made of plywood covered with formica, which permits a smooth surface by which the therapist, with the touch of a finger, may apply assistance or resistance. The use of a weight attached to the back of the wheel aids the patient in obtaining maximum motion of the shoulder joint. The weight is removable and any weight desired, graded from 1 to 8 pounds, may be added. Up to this time the 5 pound weight has proven to be the most satisfactory. The wheel is mounted on a frame which can be bolted to the floor. Having the apparatus well anchored reduces the danger of upsetting the wheel while it is in use. All the adjustments are made easily by changing the position of the adjustment bolts. The entire wheel can be raised or lowered at 1½ inch intervals to fit the particular needs of the patient. The handle is adjustable in that there are five adjustment holes approximately 1½ inches apart which allow for increasing or decreasing the circumference of the wheel.

An added feature of the wheel is the adjustment for internal and external rotation of the shoulder joint. The apparatus may be set at an angle of 25 degrees or 45 degrees for the rotation exercise. The cuff to be attached when performing this activity is placed just off-center of the wheel. This holds the patient's forearm in position and the hand grip is adjusted to allow the patient to grasp it easily while having his elbow at the center of the board. When using this feature of the wheel, the patient usually sits on a high stool with his side turned to the wheel.

Physical Therapist for W. B. Carrell Clinic, Dallas, Texas.

PATIENT'S NAME	POSITION	WHEEL HT.	GRIP	WHEEL SLANT	TIME (MIN)
Mr. Brown	FACING	6	1	1	10
	SIDE	6	1	1	10
	BACK	—	—	—	—
	ROTATION	—	—	—	—
Mr. Jones	FACING	9	1	1	10
	SIDE	9	1	1	10
	BACK	9	1	1	5
	ROTATION	3	3	3	5
Mrs. Smith	FACING	7	1	1	6
	SIDE	7	1	1	6
	BACK	—	—	—	—
	ROTATION	2	5	2	5
Mr. Thomas	FACING	5	1	1	6
	SIDE	5	1	1	6
	BACK	5	1	1	6
	ROTATION	1	4	2	3
Miss White	FACING	1	2	1	6
	SIDE	1	2	1	6
	BACK	—	—	—	—
	ROTATION	—	—	—	—
Mrs. Brantley	FACING	8	1	1	6
	SIDE	8	1	1	6
	BACK	—	—	—	—
	ROTATION	—	—	—	—
Mr. Thomson	FACING	4	1	1	6
	SIDE	4	1	1	6
	BACK	4	1	1	6
	ROTATION	1	4	2	3

Figure 1. Chart showing wheel adjustments for various patients in sitting position.

One of the many reasons for the construction of this shoulder wheel was to eliminate, as much as possible, the hyperextension of the spine while exercising the scapulohumeral joint through the complete range of motion. By having the patient work with the wheel while seated on a straight chair, this problem is reduced to a minimum.

A chart (Fig. 1) for recording the wheel adjustments permits accurate calibrated progress records. With the chart the physical therapist can show what motion the patient could accomplish at the beginning of treatments and how much progress has been made. Each time an adjustment is made, the change is recorded, thus giving a complete and accurate record. The number used on the illustrated chart shows the height

Figure 2. Rotation, using cuff to anchor forearm in position.

adjustment. Start with the number one at the top—wheel at its lowest position—and number each hole down toward the base. The holes for the hand grip are numbered from the outside of the wheel toward the center—the number on the outside being number one. The tilt, or slant, angle is numbered from the upright position to the 45 degree angle—the upright position being number one.

With the use of the various adjustments and the different positions the scapulohumeral joint can be exercised through a complete range of motion. The wheel may be used with the patient in a standing or a sitting position. It has been found that the scapula can be anchored more securely with the patient seated in a straight chair.

Following passive stretching of the scapulohumeral joint, the patient usually starts the exercise program on the wheel with abduction and adduction of the joint with the shoulder slightly flexed. The position required for this exercise is one with the patient seated facing the wheel. The weight attached to the apparatus supplies resistance for the adduction motion and assistance for abduction. If resistance is desired in abduction, the therapist may apply pressure with his fingers against the surface of the board while the patient abducts his shoulder. To increase abduction and adduction of the scapulohumeral joint in a more vertical plane, the patient can be positioned with his back to the wheel. Through the use of this position external rotation is added to the motion of the joint.

For flexion and extension exercise of the shoulder the patient is seated with his side to the wheel. The position of the weight on the wheel gives resistance for extension and assistance for flexion. Once again if resistance is needed in flexion, it may be applied by the therapist.

To increase the range of motion in external and internal rotation the wheel is adjusted to a 45 degree angle and the forearm cuff is attached. The patient sits on a high stool with his side to the wheel and his forearm in the cuff; his elbow is centered on the board as he grasps the handle (Fig. 2). The wheel is adjusted so that the arm is abducted to 80 degrees. For this exercise series the weight attachment assists and resists internal and external rotation. In addition to these positions and adjustments there are many additional ways of using the wheel—depending upon the needs of the patient.

The amount of time spent working the wheel varies according to the needs and ability of the patient. The average number of minutes used at present is 3 minutes for each motion. Thus a patient working through the complete series of positions would spend 21 minutes turning the wheel. A little more time is consumed through changing positions and making the necessary adjustments to the wheel.

The Aims of National Library Week

Marchette Chute

The United States could not exist without the written word. Take it away and the country could not operate. Very little work could be carried on or knowledge transmitted, and the civilization we know would grind to a halt.

Nor can the United States exist without readers. Ours is a government of the many, not the few, and it is based on trust in its citizens. It trusts them to have formed the habit of finding out, and that means the habit of reading. We live in a complicated and difficult time, when we must be well informed if we are to survive, and as a democratic nation we depend on knowledge as we never have before.

Yet, as a nation, we have not formed the habit of reading. A Gallup poll of 1955 showed that 61 per cent of the adults in America had not read any book except the Bible the previous year. Another survey showed that half the nation's adults live within a mile of a public library but only one fifth of them go inside. Reading has increased in recent years as measured in newspaper, magazine, and book sales and in the use of public libraries, but the increase has not been as great as it has been in many other uses of leisure time.

Certainly the people of the United States have plenty of time for reading. We have cut the 60 hour work week to 40 hours. We have invented electrical appliances that replace a great deal of manual labor. We have lengthened the life span. The opportunity exists, and the leisure, but the American people have not yet learned what can be done with it.

It is to help them learn that National Library Week has come into being. Its purpose is to encourage the people of the United States to do more reading, and its theme for the first year is "Wake Up and Read!" We cannot afford a country of lazy minds and the boredom that comes from knowing little and caring less. We cannot afford a nation of nonreaders.

Moreover, the habit of reading is not only vital to a democratic society but a source of enrichment to the individual himself. It is the people who read who have the most successful careers, for business and industry have never been able to find as many educated and intelligent men and women as they need. Moreover, any reader has in his hands one of the world's great sources of entertainment, an activity that can be practiced almost anywhere and at any age. A child can read under an apple tree, a traveller in an airplane, a housewife shelling peas, an old man bound to the immobility of a hospital bed; and each of them will be released into a world of delight that could never have existed for them otherwise.

The first emphasis of Library Week will be on the libraries of the United States, to make our fortunate citizens realize the value of this vast, free treasure that is spread out over the land, and to help them learn how to use it at full capacity. But from this beginning the activities of Library Week will reach out in many directions. It will focus attention on the vital importance of the school library, the college library, the home library.

It will underline the value of having books available in every room of the house—those easy, welcoming rooms in which every member of the family can read at his own pace and in his own way, and where even a small child can listen to a family hour of reading aloud and suddenly decide to explore for himself the magic that lies between the covers of a book.

Library Week will cooperate with those other great sources of enlightenment and entertainment, the magazines and newspapers of the United States, and it will work also through the national and local networks of radio and television. As the horizons of Americans are broadened there will be larger and more intelligent audiences for the theatre, films, music and everything else that is related to printed materials or reflected by them. And since the habit of reading is the best kind of adult education, it will take some of the strain off the school system and guarantee an education that will not stop when the college years are over but continue for life.

All this is the goal of Library Week. Its success will lie in the hands of the men and women who want to awaken their fellow citizens to the delight, the value and the magnificent opportunities of the habit of reading, and who will encourage them, in the first concerted national effort that has ever been made in this field, to "Wake Up and Read!"

The National Book Committee is sponsoring National Library Week, March 16-22, 1958

Editorial

The House of Delegates

At the thirty-fifth Annual Conference in Seattle, this June, the sound of the Speaker's gavel will open the fourteenth annual session of the House of Delegates of our Association. This session should be a particularly memorable one, in that the delegates will elect the largest Board of Directors in the history of the Association. This forward step in the growth of the organization reflects the desire for increased membership representation in determining the operations and the direction of our Association.

Each delegate should come to the meeting in June thoroughly aware of the wishes and desires of the majority of his chapter members. He should be prepared to represent his chapter's point of view and to take part in decisions that will reflect the consensus of his chapter's membership. It is only when each delegate assumes these responsibilities that the House of Delegates becomes, as a former president commented, "... the voice of our National Association."

The House of Delegates as a voting body does not have a long history, when compared to the age of our organization. The House was formally established at the May 1944 conference held at the Pennsylvania Hotel in New York City. The first annual business session was in conjunction with a meeting of the Executive Committee, the following June at Bear Mountain, New York. That year (1945), due to the national emergency and its limitation on transportation, the annual conference was cancelled. It is interesting to note this is the only time the entire voting body of our Association has met other than at an annual conference.

When organized in 1944, it was planned that the House of Delegates would "... serve in an advisory capacity to the Executive Committee and act as a coordinating group for the Executive Committee and the membership ..." Officers of the House of Delegates, consisting of chairman, vice chairman, and secretary, were selected by the delegates. These officers were not officers of the Association, nor members of the Executive Committee, and there seemed to be no well defined policies or procedures established to govern their functions. There is little wonder that indecision and duplication of effort resulted. To remedy this situation a bylaw change was adopted at the conference in May 1948, establishing the office of the Speaker of

Editorial

the House, whose incumbent would be a member of the Executive Committee, and designating the Association vice president as vice speaker and the Association secretary as the recorder of proceedings.

The June conference will be the last session over which a Speaker of the House will preside. Henceforth, the responsibilities of this office will be assumed by the first vice president.

In the early organization of the Association, all necessary business was transacted at the annual convention. Each member attending was entitled to a vote. As the membership grew and the number of chapters increased, selected representation became necessary. The Association's constitution, adopted in 1927, instituted a system of voting by chapter delegates. This new constitution permitted chapters with a membership of 10 or less 1 vote; with a membership of 15, 2 votes; with a membership over 15, 1 additional vote for each 10 members. Members-at-large (members not affiliated with a chapter) could organize themselves at the conference and were entitled to the same proportion of votes as were accorded to the chapters. It was not until 1948 that the present bylaw governing the entitlement of chapter delegate representation became effective.

Many interesting and sweeping changes have taken place in the organic structure of our Association during its 36 years of life. None are more important, perhaps, than the changes that reflect the interest and desire of our past and present leaders in keeping our organization one which is truly representative of its membership.

The fifteenth birth year of the House of Delegates should be a particularly appropriate time for each chapter to resolve that it will be represented each year by at least one well informed and instructed delegate at the annual session of the House of Delegates. Let's make the chapter representation in Seattle 100 per cent.

AGNES SNYDER
Speaker of the House of Delegates

Original papers for Conference

Members of the Association who are interested in reading a paper at the Annual Conference in Seattle are requested to submit a copy to S. Jane Houtz, Editor-in-Chief, *Physical Therapy Review*, 1790 Broadway, New York 19, New York by April 1, 1958. The Editorial Board of the *Review* will select papers to be read. Only papers submitted by April 1 can be announced in the conference program. Authors must include their official titles or positions when submitting a paper. Those submitting papers will be notified of the Board's decision not later than April 20, 1958.

CONFERENCE 1958

Seattle • June 15-20 • Olympic Hotel

Business Meetings and Program Schedule

June 12, 13 and 14 — **Board of Directors Meetings**

Sunday, June 15

9:00 A.M. — 5:00 P.M. — Section on Education
Self-Employed Section
Public Health Section

5:00 P.M. — 8:00 P.M. — **Reception**—Washington State Chapter, Host

Monday, June 16

9:00 A.M. — 5:00 P.M. — **General Registration**

9:00 A.M. — 12:00 Noon — **Delegates' Registration**

10:00 A.M. — 12:00 Noon — Group Meetings—Arthritis and Rheumatism Foundation, Crippled Children's Societies, Research Group, State Examining Committees, Veterans Administration

1:30 P.M. — 4:30 P.M. — Opening Session—Greetings, President's Address
NEUROPHYSIOLOGY A PHYSICAL THERAPIST SHOULD KNOW, Ernst Fischer, M.D., Research Professor of Physiology, Medical College of Virginia

7:00 P.M. — 10:00 P.M. — **Film Theater**

Tuesday, June 17

9:00 A.M. — 12:00 Noon — **House of Delegates**

2:30 P.M. — 5:00 P.M. — PATHOLOGICAL FACTORS WHICH LIMIT PURPOSEFUL MOVEMENT, to be presented by a neurosurgeon
PANEL DISCUSSION: AS WE SEE IT—SEMANTICS IN THEORIES OF REEDUCATION, Ernst Fischer, M.D.; Berta Bobath, Principal, The Western Cerebral Palsy Centre, Ltd., London, England; Margaret Knott, Physical Therapy Director, California Rehabilitation Center, Vallejo, California; Margaret Rood, Professor, Physical Therapy Department, University of Southern California

6:00 P.M. — 7:00 P.M. — **Reception for Board of Directors**

7:30 P.M. — **Annual Banquet**

Wednesday, June 18

9:00 A.M. — 11:00 A.M. — **House of Delegates**

2:30 P.M. — 5:30 P.M. — HOW WE DO IT — Lectures and Demonstrations, Karel Bobath, M.D., Senior Assistant Psychiatrist, Brookwood Hospital, Surrey, England, and Berta Bobath; Margaret Knott; Margaret Rood (Rotational Session)

7:00 P.M. — 10:00 P.M. — **Film Theater**

Thursday, June 19

9:00 A.M. — 12:00 Noon	THE PATIENT: ANALYSIS OF MOTOR DYSFUNCTION; PLANNING OF ACTIVITIES, CRITERIA FOR MEASUREMENT OF PROGRESS; Berta Bobath, Margaret Knott, Margaret Rood, Ernst Fischer, M.D.
	PANEL DISCUSSION: TESTING AND MEASUREMENT — PURPOSES AND METHODS. An orthopedist, a physiatrist and two physical therapists will participate.
2:00 P.M. — 4:00 P.M.	THE PHYSICAL THERAPIST'S UNDERSTANDING OF THE PATIENT'S EMOTIONAL REACTIONS TO DISABILITY — to be presented by a psychiatrist. Several physical therapists will pose questions for discussion.
5:00 P.M.	**Salmon Barbecue**

Friday, June 20

9:00 A.M. — 12:00 Noon	CURBSTONE CONFERENCES — Demonstrations by more than 20 physical therapists
	ANY QUESTIONS? Ernst Fischer, M.D., Berta Bobath, Margaret Knott, Margaret Rood
	CORRELATIVE SUMMARY OF TECHNICS, Ernst Fischer, M.D.
2:00 P.M. — 3:00 P.M.	ULTRASOUND — to be presented by a physiatrist and a physical therapist
3:30 P.M. — 5:00 P.M.	CONCURRENT SESSIONS — Topics of interest to be presented by an anesthesiologist and several physical therapists. Original Papers (Prepared and read by members)

Conference Facts

Hotel

The Olympic, Seattle's nationally known hotel, occupies a solid square block in the hub of the city. Air conditioning provided by nature.

Rates

Single rooms	$7.00 to $15.00
Double Bedded Rooms for Two	$10.00 to $18.00
Twin Bedded Rooms	$13.00 to $20.00
Suites	$30.00 to $40.00

All rooms have combination tub-shower or shower.

Hotel Reservations

A reservation will be included in your dues notice. It should be sent directly to the Hotel Olympic at least 30 days in advance.

Note: Reservations received after all sleeping rooms in the Olympic have been taken will automatically be assigned to one of two other designated hotels. The Olympic will not guarantee space for reservations received after May 15.

Those who wish to room together should send in only one reservation card indicating the number of persons to occupy the room. The number of minimum priced rooms is limited and the hotel will acknowledge reservations within a range dependent upon availability at the time of arrival. When single rooms are filled you will be assigned a double room at a reduced rate.

Registration

Active, Inactive and Foreign Probationary Members	$6.00
Student Members	$2.00
Nonmember Physical Therapy Students	$4.00
Nonmember Graduates of Approved Schools	$15.00
Members of Physical Therapy Organizations Affiliated with the World Confederation for Physical Therapy:	
Visitors	$6.00
Residents of this country	$15.00

Nonmembers will be requested to present credentials.

You are urged to register in *advance*. If you do not register in advance you *must* present your membership card at the Conference Registration Desk. Registration forms for advance registration will be found in your dues notice.

Deadline for advance registration is May 15, 1958.

Exhibits

Exhibits Manager: Gordon M. Marshall, 30 West Washington Street, Chicago 2. Scientific Exhibit space is assigned by the American Physical Therapy Association.

Social Events

An innovation! Two evenings of fun at a reduced price. On Tuesday evening there will be the Annual Banquet for which the Chapter plans to provide nationally known entertainment. On Thursday evening there will be a Salmon Barbeque outside the hotel. When you register in advance be sure to take advanage of the reduced price by purchasing tickets for both events.

We guarantee fun for all.

Film Theater

Members or organizations desiring to show movies, slides, or filmstrips at the Annual Conference may apply for inclusion in the program.

Visual aids of special interest are related to subject areas of the scientific program: growth and development, neurophysiology, exercise technics, tests and measurement, emotional response to disability, ultrasound, myofascial pain and physical fitness.
Applications should be sent to the American Physical Therapy Association before May 1, 1958, and should contain the following information:

Title of film, slides, or filmstrip;
Producer and/or distributor's name and address;
Technical data: black and white or color; sound or silent; film or slide size; running time of film, or number of slides and time needed to show them; year produced;
Name or organization sponsoring participation in film theater and of person who will be responsible for material.

The Program Committee will select for the Film Theater those films and slides which in its judgment will be of greatest interest to the audience, which best relate to subject matter, and which will fit into the time allotted.

Let's Explore

.... Washington's Industries

As you enter Washington State by one of the various approaches on your way to the Annual Conference in 1958 and see the vast wheat fields in Eastern Washington, the fertile valley of the Columbia River to the south, and the rugged mountains which divide the State into two entirely different types of land and climate, you may wonder by what means the people of Washington achieve happiness and prosperity in the balance between work and recreation.

In future *Review* articles you will see more of the variety of recreational activities available to those of you fortunate enough to have vacation time to spend in this ideal playland. For the present let us explore the land and resources and industry some of which you will see en route to the beautiful city of Seattle.

As you cross the mighty Columbia you will see a part of the great supply of water resources of Washington. In the early days our swift streams in their journey from high mountain tops turned water wheels for grist mills and sawmills; and now, the many rivers and lakes make Washington, with its potential water power as well as that already harnessed, the richest state in the nation in hydroelectric power. The huge dams which include many besides the Grand Coulee provide the cheapest electricity in the nation, an attraction for industry and a factor which makes Seattle the greatest user of electric stoves and electric heating of any city regardless of size. The dams also provide flood control measures and provide for irrigating thousands of acres of otherwise arid lands for productive farming. Since irrigation has been used on a large scale Washington has become a leading fruit grower, and the production of wheat has expanded. Other crops grown in the irrigated areas include hay, potatoes, sugar beets, hops, beans, vegetables, oats, corn, spring wheat, and barley. Washington produces one-fourth of the nation's apples in the Wenatchee Valley. Yakima County is the leading agricultural county of the State and is fifth or sixth among the more than 3,000 counties of the United States. In the Yakima Valley 200,000 people make their living as a direct result of irrigation in the raising of peaches, pears, cherries, apricots, and prunes and other types of foods. Tree farms have been started, raising trees as a crop in the irrigated country, making an addition to Washington's already great productivity of trees.

Leaving the irrigated country, in the Cascade and Olympic Mountains our thriving forests provide a living for many of Washington's citizens. From logging to pulp, paper, plywood, and the many other wood products our forests provide a huge industry. In the early days when settlers first came to Washington they as well as the fur traders and Indians used trees for firewood and for building canoes and spars for their vessels' sails; the cooking of wood to form pulp was just in the process of experimentation. Newer methods in conservation and the utilization of all the scraps from finishing in the pulp process has insured a future in the lumber industry. Logging is now performed in a checker-board manner to allow areas to be seeded by remaining trees and by thinning trees allowing those still standing space in which to mature. The direction of felling a tree is predetermined to prevent damage to other trees. Pre-logging saves smaller trees in the path of a huge Douglas fir about to be felled and greatly increases the productivity of wood products. An all out battle on forest fires whether on federal, state, or private lands saves lumber and money. The most important species found in the State are the Douglas fir, hemlock, cedar, spruce, and balsam west of the Cascades, and in the eastern part of the State pine and larch mixed in with firs and cedars.

Another great industry in the Northwest is the fishing industry. Two hundred edible species pass through the Washington ports. Five varieties

of salmon lead the canned fish commerce of the world, and an abundant supply of halibut makes Seattle the largest halibut port of the world. (To see the fishing fleet in the Ballard area of Seattle is a must on your agenda.) Clams and crabs are found in abundance on the Washington coast and a smaller supply of oysters.

In western Washington dairy farming, the growing and canning of vegetables and berries is a profitable occupation. The production of bulbs —tulips and daffodils in the Puyallup Valley is second only to that of Holland.

Many and diverse industries have sprung up in Washington which has grown from pioneer country to an industrial area in a short 100 years. Due to the cheapness of water power many industries now process the materials obtained locally into finished or partially finished products. In the processing of aluminum Washington leads the nation.

Our first and foremost industry in the State is aircraft production. Boeing's Aircraft in Seattle and Renton employs just under 70,000 mea. Plastic and fiber glass products and those required for today's popular outdoor living help diversify the industry. A recent addition is the manufacture of atomic weapons in eastern Washington.

State fish hatcheries help to keep our fish supply from dwindling. Fish ladders are built around the huge dams to preclude loss of fish by helping them in their return to their spawning grounds. When the Indians were the sole inhabitants of the State, their population being some 50,000, and used salmon only for their own needs conservation was not a problem.

Bureau of Reclamation
Ephrata, Washington

Grand Coulee Dam

In the area of mild climate in Washington which makes outdoor work possible all year round absenteeism is at a minimum. Washington is the ideal place for work as well as play.

See you in Seattle in 1958 for a combined convention-vacation!

Section on Education

Vice Chairman
RUTH COOK

MARGERY WAGNER, *Chairman*

Recording Secretary
MARGARET KNOX

Treasurer — CORINNE WAY

Sunday, June 15 — **Williamsburg Room**

9:00 A.M. — 10:00 A.M.
VISUAL AIDS RELATING TO PHYSICAL THERAPY
Speaker: Helen J. Hislop, Assistant to the Director, Division of Professional Education, National Foundation for Infantile Paralysis

10:00 A.M. — 10:30 A.M.
Coffee Break

10:30 A.M. — 11:30 A.M.
INTRODUCTION TO COMMUNICATIONS
Speaker: Burton J. Ballard, Public Relations Director, State Bar of California

11:30 A.M. — 12:00 NOON
Break

12:00 NOON — 2:00 P.M.
Luncheon and Business Meeting

2:00 P.M. — 4:00 P.M.
WORKSHOP IN COMMUNICATIONS — PROBLEMS RELATING TO PHYSICAL THERAPY INSTRUCTION AND CLINICAL SUPERVISION
Directors: Mr. and Mrs. Burton J. Ballard

Monday, June 16 — **Pacific Room**

9:00 A.M. — 12 NOON
Trading Post — by appointment, or not; for conferences between two or in groups. Your opportunity to talk with others with similar interests! Trade your ideas, materials, and information!

Public Health Section

Vice Chairman
PATRICIA ADAMS

CLARA ARRINGTON, *Chairman*

Secretary
ANNA SWEELEY

Treasurer—WILHELMINA WERKHOVEN

Sunday, June 15

8:45 A.M. — 5:00 P.M.	**Colonial Room**
8:45 A.M.	Registration for Public Health Section Meeting
9:15 A.M.	*Panel*
	Carolyn Bowen, Moderator
	William King, Manager, Mobile Therapy Unit Program, to discuss the "Development, Organization, and Administration of Elks Mobile Therapy Program."
	Erma C. Myers, to discuss "The Program and Our Relation to Other Agencies Providing Services."
	Lois Radomske, to discuss "Equipment—Standard and Improvised."
	Elks Mobile Therapy Unit Program Moving Picture Film in color.
	General discussion of the program to provide listeners an opportunity to ask questions, etc.
10:30 A.M.	Intermission
10:45 A.M.	General Discussion
1:30 P.M.	*Panel*
	Philip A. Austin, Head, Hospital and Nursing Home Section
	Carolyn Bowen, Physical Therapy Consultant, Maternal and Child Health and Crippled Children's Services Section, Division of Child Health Services
	Elizabeth Tucker, Nursing Home Consultant, Hospital and Nursing Home Section
	Evelyn Bengson, Occupational Therapist, Hospital and Nursing Home Section
	Vera H. McCord, Hospital Services Consultant, Hospital and Nursing Home Section
3:00 P.M.	Intermission
3:15 P.M.	Discussion
4:30 P.M.	Business Meeting

Public Health Section

The annual meeting of the Public Health Section will be held in Seattle, Washington, on Sunday, June 15, 1958, from 9 A.M. to 5 P.M. All members of the American Physical Therapy Association interested in the objectives of this Section are invited to attend. The program will be of particular interest to physical therapists working in a public health setting who are employed by a public or private agency or institution. Registration for this Section will be from 8:45 to 9:15 A.M.

At the morning session a panel will discuss the development of the Mobile Therapy Unit of the Washington Elks Major Projects, Inc. and the relationship of the Unit program to other public health agencies. The afternoon session will be a panel presentation by the Hospital and Nursing Home Section, Division of Chronic Disease Control and Institutional Standards, Washington State Department of Health. The panel members will present their philosophy in helping nursing homes accept and use principles of rehabilitation and the use of physical and occupational therapists in their program. Both the morning and afternoon presentations will be followed by a general discussion period.

Following the afternoon program, a short business meeting for members of the Public Health Section will be held. Any member of the American Physical Therapy Association holding a position concerned with physical therapy in a public health setting is eligible for membership in this Section. Association members interested in becoming members of this Section should apply for membership to Patricia Adams, Vice Chairman, Public Health Section, University of Connecticut School of Physical Therapy, Storrs, Connecticut. When making application please forward the following information: full name, place of employment, mailing address, physical therapy school and year of graduation. The annual dues are $1.00, payable to The Public Health Section, American Physical Therapy Association, and should accompany application.

School Physical Therapists' Luncheon in Seattle

Physical therapists who are employed in schools for the physically handicapped are invited to express their interest in a get-together during the 35th Annual Conference in Seattle. Any other members of the Association who may be interested are welcome. In order that an expression of interest may be obtained, it is suggested that you write stating which type meeting you prefer—luncheon or otherwise.

Address correspondence to:

Laura M. Burkholder
Box 1003
Bartow, Florida

What Is a Curbstone Conference?

It won't settle the world's problems but does offer you a chance to pick up some worthwhile first- or second-hand information. When you walk down the street and meet a friend at the curbstone, he may toss an idea your way which will set you to thinking or you may have an opportunity to ask a question which has been on your mind for days.

Our 35th Annual Conference may be a "summit talk" in some respects but on Friday morning, June 20, all those attending the Conference will participate at the "curbstone." Quite a crowd, you say? Well, the Curbstone Conference will give you a choice of at least 24 curbstones in five or six rooms where you may observe demonstrations of the technics discussed during the week. Insofar as possible a great variety of patients will be presented including those with arthritis, cerebral palsy, cerebral vascular accident, multiple sclerosis, muscular dystrophy, parkinsonism, poliomyelitis, Erb's palsy, polyneuritis, peripheral nerve injuries, various orthopedic disabilities and many others.

Where to go? And what to see when there are so many patients and physical therapists you would like to observe? You will want to watch the daily conference paper for announcements of which demonstrations will be held where and then it's up to you to make your choice. You may wish to confine yourself to one demonstration for the entire hour or you may want to stop by at several. Whatever your decision, we hope that you will find some of your questions answered.

Speaking of questions, there will be a "Question Box" at the Information Booth and you may drop in your questions at any time during the week. Your questons will form the basis of the general session, "Any Questions," which will immediately follow the Curbstone Conference. Last of all, but perhaps the most important phase of the entire program, will be the Correlative Summary of the information presented during the week.

What Is a Rotational Session?

The Wednesday afternoon session of the Conference Program will be unique in that the entire group attending Conference will witness three 45 minute lecture-demonstrations of the three concepts of treatment considered during the week. A general session would be too large to permit you to gain from the demonstrations so in order to accomplish the necessary division into three groups you will each receive a colored tag when you register. Members having tags of the same color will meet in the same room. You may exchange tags with someone else before Wednesday if you find a friend you'd like to be with.

How does it become a rotational session? You won't rotate but the speaker-demonstrators will. You will stay and they will come to you. This procedure should save time and avoid confusion.

Belgian Physical Therapists to Hold Meeting

The Belgian National Federation of Kinesists (F. N. B. K.) which is a member organization of the World Confederation for Physical Therapy announces its Second Conference on Kinesitherapy and Physiotechnique and Film Festival for Kinesitherap[illegible]d Physiotechnique. This will be held in Bru[illegible] May 15 through 18, 1958.

The themes of the Conference will be study of the techniques and recent achievements in kinesitherapy and physiotechnique and the kinesist-physiotechnician before the human and deontologic problem.

The four official languages of the Conference will be English, French, German and Dutch. The meeting on May 15 will be an academic session and visits in Antwerp. Monday, May 19, visits to several centers are being planned. An exhibition of scientific and technical apparatus will be part of the Conference.

The purpose of the Film Festival is to provide an opportunity for kinesists and physiotechnicians to exchange ideas and communicate results of scientific research and technique.

Further details and information may be obtained from

Monsieur J. Nile
General Secretary, F.N.B.K.
94, Avenue d'Auderghem
Brussels 4, Belgium.

Association News

Marriages

Carolyn J. Alderman, of Durham, N. C., to Robert H. Gibbs, Durham.

Barbara A. Bowles, of Indianapolis, Ind., to David J. Morgan, Indianapolis.

Marguerite Daigle, of Montreal, P. Q., to Georges Mercier, Montreal.

Helen Raynsford, of Bergenfield, N. J., now Mrs. Helen R. Naugle, North Hollywood, Calif.

Natalie Seidner, of Bronx, N. Y., now Mrs. Natalie S. Rose, Liberty, N. Y.

Shirley M. Skarda, of Milwaukee, Wis., to Carl W. Zillier, Milwaukee.

Garland M. Smith, of South Bend, Ind., to Evelyn L. Bruck, Indianapolis, Ind.

Winifred W. Werry, of Merritt Is., Fla., now Mrs. Winifred W. Blair, Cocoa Beach, Fla.

Tri-State Convention — Illinois Chapter Workshop

The Illinois Chapter will hold its annual Workshop Weekend on April 26-27 prior to the Tri-State Convention in Chicago. Signe Brunnstrom will present "Motor Behavior of Adult Patients with Hemiplegia and Its Application to Training Procedures." A nominal fee will be charged. Members interested in attending and who wish additional information should write to:

Isabelle Bohman
Dept. of Physical Medicine and Rehabilitation W-130
University of Illinois Research and Education Hospitals
840 So. Wood
Chicago 12, Illinois

Nominations for Directors

Officer candidates appeared in the February *Review;*
Nominating Committee candidates will appear in April.

FOR DIRECTOR

(Three to be elected to serve terms of one year)

Louise Bailey, Physical Therapy Consultant, National Society for Crippled Children and Adults, Inc., Chicago

Association member since 1937

Chapter positions: President, Hawaii; Vice President, Hawaii

National positions: Chairman, Nominations Committee; Member, Committee to Study Nature and Functions of Department of Professional Services; Member, Advisory Committee on Professional Services; Director; Secretary

E. Jane Carlin, Assistant Director, Division of Physical Therapy, School of Auxilliary Medical Services, and Associate Professor, University of Pennsylvania, Philadelphia

Association member since 1942

Chapter positions: President, Pennsylvania Chapter; Chairman, Education Committee, Pennsylvania

National positions: Education Consultant, National Office Staff; Editor-in-Chief, *Physical Therapy Review*; Speaker of House of Delegates; President

Ruby Decker, Educational Director, School of Physical Therapy, University of Texas Medical Branch, Galveston

Association member since 1937

Chapter positions: President, Texas; Chairman, Southeastern District, Texas; Chairman, Program Committee, Texas; Chairman, Nominating Committee, Texas

National positions: Vice President, School Section; Chairman, Conference Program Committee; Member, Nominations Commitee.

Mildred Heap, Director, School of Physical Therapy, University of Buffalo

Association member since 1930

Chapter positions: Secretary, Ohio; Chairman, Western District, New York

National positions: Second Vice President (1946-1948)

Florence S. Linduff, Chief Physical Therapist, Veterans Administration, Washington, D.C.

Association member since 1937

Chapter positions: President, District of Columbia; Chairman, Membership Committee, District of Columbia

National positions: Chairman, Education Committee; Chairman, Nominating Committee; Member, Program Planning Committee, Second Congress, World Confederation for Physical Therapy

Vida Jo Niebuhr, Chief Physical Therapist, National Institutes of Health, Bethesda, Maryland

Association member since 1938

Chapter positions: President, District of Columbia; Chairman, Exhibits Committee

FOR DIRECTOR

(One to be elected to serve term of two years)

Elizabeth Addoms, Physical Therapy Program Director and Associate Professor of Education, New York University

Association member since 1945

Chapter positions: Chairman, Greater New York District; Director, Greater New York District; Chairman, Legislation Committee, Greater New York District; Director, New York Chapter; Elective-Director, New York Chapter.

National positions: Member, Committee on Education; Member, Advisory Committee on Education; Vice Chairman, School Section; Chairman, School Section; Member, Professional Examinations Committee.

Katharine Chilcote, Assistant Chief Physical Therapist, Veterans Administration Hospital, Denver

Association member since 1947

Chapter positions: President, Colorado; Director, Colorado; Chairman, Relations Committee; Chairman, Legislation Committee.

National positions: Member, Advisory Committee on Chapter Activities; Chairman, Advisory Committee on Chapter Activities.

FOR DIRECTOR

(Four to be elected to serve terms of three years)

Sarah Bassett, Head Physical Therapist, Boston Dispensary, New England Medical Center, Boston

Association member since 1946

Chapter positions: President, Massachusetts; Chairman, Public Laws Committee, Massachusetts; Secretary, Carolina

National positions: Member, Advisory Committee on Chapter Activities

James Bauer, Assistant Professor, School of Physical Therapy, University of Connecticut, Storrs

Association member since 1951

Chapter positions: President, Connecticut; Chairman, Education Committee, Connecticut

National positions: Member, Finance Committee

Edna Blumenthal, Director of Rehabilitation, North Carolina Cerebral Palsy Hospital, Durham

Association member since 1932

Chapter positions: President, North Carolina; Director, North Carolina; Corresponding Secretary, Maryland; Secretary, Southern District, Ohio

National positions: Member, Nominations Committee; Member, Conference Program Committee

Ruth Burnet, Supervisor, Children's Convalescent Center, Jacksonville, Arkansas

Association member since 1946

Chapter positions: President, Arkansas; Secretary, West Central District, Ohio.

Rebecca Hastings, Physical Therapist, Cerebral Palsy Unit, William S. Baer School, Baltimore

Association member since 1938

Chapter positions: President, Maryland; Vice President, Maryland

Mary Elizabeth Rexroad, Physical Therapy Consultant, Oklahoma Commission for Crippled Children, Oklahoma City

Association member since 1946

Chapter positions: Director, Oklahoma Chapter; President, Oklahoma Chapter; Vice President, Oklahoma Chapter; Chairman, Legislative Committee, Oklahoma, Chapter

National positions: Member, Committee to Study Nature and Function of Department of Professional Services; Member, Advisory Committee to Department of Professional Services

FOR DIRECTOR (continued from pages 182-183)

Kathryn Shaffer, Assistant Professor, School of Physical Therapy, University of Wisconsin, Madison

Association member since 1945

Chapter positions: Secretary, Wisconsin; Second Vice President, Wisconsin

National positions: Associate Editor, *Physical Therapy Review*

Robert Teckemeyer, Self-employed, Santa Rosa, California. Director, Marin Convalescent and Rehabilitation Hospital

Association member since 1948

Chapter positions: President, Northern California; Director, Northern California; Advisor, Northern California. Director, Marin Convalescent and Rehabilitation man, Legislation Committee, Northern California

National positions: Recording Secretary, Self-Employed Section

Index to Current Literature

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ARTHRITIS

Contemporary Research on the Pathology of Rheumatic Disease Reviewed in Light of 100 Years of Cellular Pathology. D. H. Collins, Ann. Rheumat. Dis., Lond., 16: 290-296, September 1957

BRACING AND SPLINTING

A Splint for Gait Training with Hemiplegic Patients. P. Lyttleton, Physiotherapy, 43: 329, November 1957

CEREBRAL PALSY

The Causes and Prevention of Cerebral Palsy. Nicholson J. Eastman, Pediat. Clin. N. America, 995-1002, November 1957

The Early Diagnosis of Cerebral Palsy. L. P. Britt, Pediat. Clin. N. America, 1003-1011, November 1957

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Diagnosis and Management of Peripheral Venous Diseases. Gunnar Bauer, Am. J. Med., 23: 713-723, November 1957

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The Clinical Diagnosis of Arterial Insufficiency of the Extremities (Legs). John V. Waller, N.Y. State J. M., 57: 3815-3821, Dec. 1, 1957

Haemodynamics, Measurement and Nervous Control of the Limb Circulation. A. D. M. Greenfield, Am. J. Med., 23: 675-683, November 1957

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A Modern Liberal Education in Medicine? Douglas Black, J. M. Educ., 32: 751-766, November 1957

Medical Education in the United States and Canada. Council on Medical Education and Hospitals of the American Medical Association, J. Am. M. Ass., 165: 1393-1457, Nov. 16, 1957

ELECTRODIAGNOSIS

Electromyography in Disc Disease. Francis J. Bonner and William H. Schmidt, Arch. Phys. M., 38: 689-691, November 1957

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Restorative Services for the Aged. S. D. Pomrinse, Ann. Int. M., 47: 900-903, November 1957

The Process of Aging Has Emotional Problems. H. A Steckel, Postgrad. M., 22: 511-514, November 1957

(continued on page 204)

Mathea A. Boxeth

Mathea A. Boxeth, a charter member of the Association passed away in Los Angeles on December 22, 1957 after an illness lasting several years. Miss Boxeth, who was also a charter member of the Washington State Chapter, became a pioneer in our profession when in 1918 she graduated at Reed College, Portland, Oregon, from the "Physiotherapy for Reconstruction Aides Course." During World War I she served as a Physiotherapy Reconstruction Aide at Fort McHenry and was discharged from Fort Snelling in St. Paul in 1919. She then returned to her home in Seattle where in 1923 she opened the first physical therapy department in that city. She later organized other Seattle physical therapy departments in Providence and Swedish Hospitals and was in charge of the physical therapy department in the Medical Dental Building.

From 1930 to 1932 Miss Boxeth served as Chairman of the American Physical Therapy Association Legislative Committee. While on the staff of the Neurological Institute of New York City she served two years as president of the New York Chapter and presented a paper at the 1933 annual conference. This was published in the September-October 1933 issue of the *Physical therapy Review*, "Our Work With the Birth Injured at the Neurological Institute of New York City."

The conclusion of Miss Boxeth's annual legislative committee's report for 1931 at a time when only two states had laws relating to the practice of physical therapy is timely today. "The question now arises what shall we do for the future? Are we large enough a body to combat the numerous cults which predominate this country? Politics we know holds sway everywhere depending upon how the legislators and senators have been approached. We have many friends in the medical profession who are pulling for us. The Committee feels that we must give this matter serious thought, and when the time comes for us to present any form of legislation we should be one body pulling for one aim: Cooperation must be our slogan."

South Dakota Chapter Invites Tri-State Members

Members of Iowa and Nebraska Chapters are invited to join the South Dakota Chapter at the Third Annual Tri-State meeting to be held in Sioux Falls on April 18-19. The theme of the program will be "The Future of Physical Therapy." All sessions will be held at the Crippled Childrens Hospital and School.

Chapter News

Northern California

The Chapter has announced a professional essay contest open to Northern California members. Contestants may write on any subject to do with physical therapy. One prize of $25.00 will be awarded to a graduate physical therapist member and one $10.00 prize will be made to a student member. A committee of judges has been appointed and will render a decision following the closing date of entry which is May 15.

The December 1957 newsletter asks—

"If every Chapter member were just like me.
What kind of Chapter would my Chapter be?"

Kentucky

"Form and Function of Muscles and Dermatomes" was presented at the January Chapter meeting by Peter Jones, M.D., neurosurgeon. The Chapter is searching for a suitable name for the newsletter according to the December 1957 issue which is Vol. I. No. 2.

Massachusetts

The winter 1957 issue of the newsletter comprises 23 pages of information of interest to chapter members including six advertisements of equipment and uniforms. In recognition of 1957 graduates of the three schools of physical therapy a map of the United States with locations of the graduates has been produced. Thirty of the Class of '57 have remained in Massachusetts and their names and places of employment are listed. Humorous remarks or quotations are interspersed between major items of the newsletter. Typical of these is, "Learning without thought is labor lost."

Michigan — Eastern District

The District participated in a three-day Career Carnival sponsored by the Flint Board of Education. A wide variety of professions included medical, dental, religious, and industrial groups. Physical therapy was a part of the booth on Hospital Careers.

New York

The newsletter is now supported by four advertisers (November 1957 issue). The Chapter has recently appointed a committee to study fees

charged for physical therapy services. Each New York District and each member is urged to cooperate in this study. New York Districts now assume travel expenses for their Directors attending meetings of the New York Chapter's Board of Directors' meetings.

Oregon

The December newsletter includes the information gained from the APTA 1956 survey which is pertinent to personnel policies for physical therapists in Oregon.

The Chapter now has a Physical Therapy Fund Committee, members having been appointed at the October meeting.

New York — Greater New York District

"Writing for Publication" was discussed by Malvina Rich Lewis, Assistant to the Editor of the *New York State Journal of Medicine*, at the January meeting of the District.

Wisconsin

The Chapter at the November meeting established a policy which will require that an agenda for each business meeting be sent to members along with notices of meetings. The January 1958 newsletter urges members to recruit students to the profession with the following:

Let's all make 1958
The best recruitment year to date.
Put your shoulder to the wheel
And push recruitment with much zeal.
Let everyone get on the ball
And put up posters in the hall.
Get word out in newsprint, on radio and T. V.
That a Physical Therapist is the thing to be.
Now before you sit down and write a letter
Just send us a poem that is better.

National Society for Crippled Children and Adults Publishes Booklets

Booklets by two noted authors, first of a unique series designed to help parents of crippled children, but equally applicable to those of children who are not handicapped, have just been published by the National Society for Crippled Children and Adults.

In one, Earl Miers, prominent author, editor, and Civil War authority, has written his own story of conquest of cerebral palsy in "Why Did This Have to Happen?" Dr. Grace Langdon, one of the country's well known leaders in the field of child development and specialist in the relation of toys to every day living, has written the second, "Your Child's Play."

To assist in solving the perplexing problems which confront parents in raising handicapped children, Mr. Miers offers inspiration and Dr. Langdon, practical advice to all parents, for use in the day-by-day relationships with their children.

Mr. Miers in his moving life story, points his lesson thus: "I watch two men coming down the street. One propels himself on crutches, the other strides along on a sound pair of legs... My eyes cannot tell me which of these two is more severely handicapped... I speculate over which is fitter to survive in the specific environment that we share. Which is the more courteous? The more likely to smile? The more aglow with a warmth for life? The more responsive to another's need? The more willing to render faithful service to his employer, his community, his family? Which is better trained in his work and thus more capable of bringing insight and imagination to his labors? Which is less filled with prejudice, less consumed with deceit?"

He goes on to say: "Judge and musician, innkeeper and statesman, actor and surgeon—each endures by holding onto beliefs. For any person possessing firm foundations of intellectual strength and spiritual stamina, legs that wobble or arms that shake constitute inconsequential handicaps. As long as any man has a right to be born, a purpose to fill on earth, then a crippled child holds the same right, the same purpose."

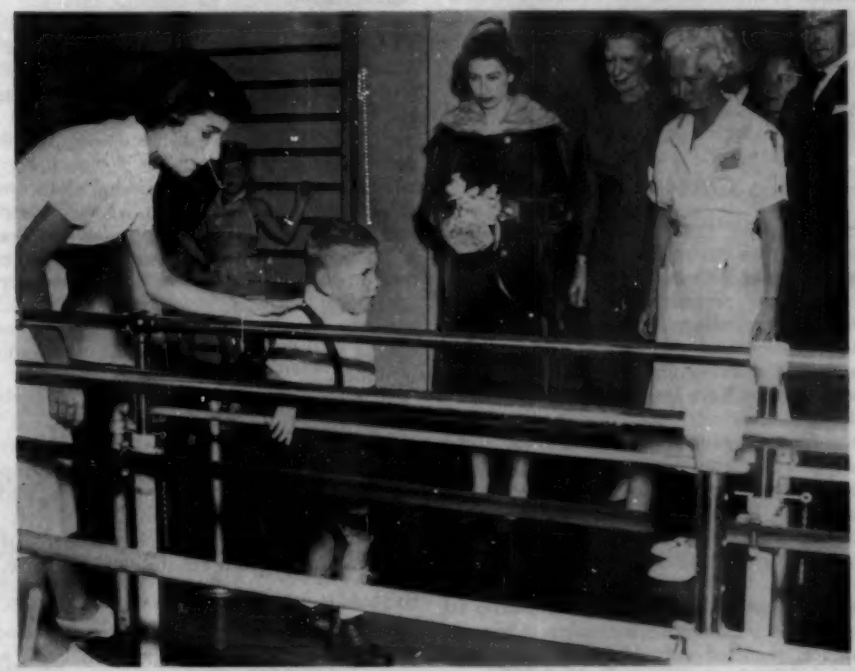
Dr. Langdon in her booklet points out that all children, whether crippled or not, live through play and she offers guidance in play interests, materials, and facilities as well as friends with which to share them.

She says: "Play is much more than filling in time when a child has nothing to do. Through play a child investigates, explores, experiments, discovers. He learns the feel of things. He discovers what he can do with them... He notices the motion of things around him, and with hands, arms, legs, joins in this movement through feeling its rhythm... As a child plays he puts his ideas and feelings into action. He finds out what will work and what will not. He picks up new ideas and tries them out. He enjoys, thinks, feels, lives through his play."

Twenty-two additional booklets, two more scheduled for publication in 1958, will comprise the Parent Education series as it is presently planned. These will be on subjects such as the young child in the family, orthopedic handicapping conditions, problems of adolescence, and emotional growth in parents.

Purposes of the series, as set forth by Dean W. Roberts, M.D., executive director of the National Society, are to offer guidance to parents in creating an abundant and satisfying life experience for themselves and their children; to dispel feelings of loneliness and helplessness in facing problems of growth and development; to provide a medium through which the parent may grow with his child, and to give insight through competent information.

The booklets are available at the nominal charge of 25 cents each from the National Society for Crippled Children and Adults, 11 South LaSalle Street, Chicago 3, Illinois.



Queen Elizabeth Observes Physical Therapy

Among Queen Elizabeth's visits during her recent stay in Washington, D.C., was a call at Children's Hospital. From left to right in the foreground of the photo are Mrs. Percy Poulos, physical therapist; Diane Warfield (in background) and Francis Mahaney, patients; Queen Elizabeth; Miss Edith A. Torkington, Administrator, Children's Hospital; Mrs. Marjorie L. C. Maguire, Chief Physical Therapist; and two members of the Queen's entourage. Mrs Maguire and Mrs. Poulos are members of the Association and the District of Columbia Chapter.

Mrs. Maguire in her letter regarding Queen Elizabeth's visit states, "We felt honored to have such a distinguished guest visit our Physical Therapy Department. There were eight patients present at the time and the Queen was quite attentive as we moved through the Department and I explained to her just what each patient was doing and the reason. The Queen was most gracious and appeared genuinely interested in each individual. She had a kind word for each child present."

Honorary Member Receives Honorary Degree

Dr. George Morris Piersol, Honorary Member of the American Physical Therapy Association since 1951 and a member of the Association's Advisory Council in 1947-1948, was awarded an honorary degree of Doctor of Science by the University of Pennsylvania at the midwinter commencement exercises on Feb. 8, 1958. Dr. Piersol upon his retirement in November, 1957, was dean of the Graduate School of Medicine. Prior to becoming dean in 1954, he had served as professor of medicine in the Graduate School since 1920, as professor of physical medicine and rehabilitation, and as professor of clinical medicine.

The Association extends congratulations to Dr. Piersol for this well deserved recognition and honor.

Drop In Polio Cases

Commenting on the dramatic drop in reported polio cases during 1957, Basil O'Connor, president of the National Foundation for Infantile Paralysis, recently cautioned that it is yet too early to draw scientific conclusions. While the widespread use of the Salk vaccine has been an important factor, scientists point out that 1957 may have been a year of low polio virulence.

In the first 11 months of 1957, only 5,747 polio cases were reported in the entire nation. This is a decline of 62 per cent from the corresponding 1956 figure of 14,974, and a breathtaking drop of 83 per cent from the 1952-56 five year average of 34,321 cases for the first 11 month period.

In specific areas of the country, the drop in polio cases was even more spectacular. Chicago, for instance, reported only 18 cases in the first 11 months of 1957, as compared with 1,105 cases in the first 11 months of the epidemic year of 1956, a drop of 98 per cent.

Massachusetts reported only 24 cases for the first 11 months of 1957, as against a 1952-56 five year average for the same period of 1,227 cases, a drop of 98 per cent.

Minnesota reported only 52 cases, as compared with a 1952-56 average of 1,539, a decline of 97 per cent. All of New England reported only 81 cases, as compared with the 1952-56 average of 2,127, a decline of 96 per cent.

The smallest regional decline from the five year average was 71 per cent in the west south central states of Arkansas, Louisiana, Oklahoma, and Texas, with 1,077 cases in the first 11 months of 1957, as compared with 3,735 for the same period in the years 1952-56.

100,000 Still Need Help

Despite these dramatic drops in polio incidence, Mr. O'Connor said, the war on polio is by no means finished.

"There are some 300,000 persons alive today who have suffered paralytic polio. Of these, it is estimated that 100,000 still may be helped to a fuller and more gainful life by modern surgical technics and recent advances in the technics of rehabilitation."

The National Foundation used $21,700,000 in 1957 to bring medical care and rehabilitation to 57,800 polio patients. Of this number, 53,000, or 90 per cent of the total, were patients stricken in previous years. In 1958 the National Foundation estimates it will need $21,100,000 for patient aid.

"Thus we see that while 'new' cases continue to drop, 'old' cases still require millions of dollars," Mr. O'Connor said. "Since its founding in 1938, the National Foundation has used a total of $279,400,000 to bring medical care and rehabilitation to 325,000 polio patients. Now, with the conquest of polio within our grasp, we cannot walk off the battlefield and abandon the wounded."

A massive nationwide survey of polio sufferers, begun last August by the National Foundation's 3,100 chapters, has disclosed many patients whose cases never were officially reported. The National Foundation now hopes, under its 1958 March of Dimes campaign theme, "Survival Is Not Enough," to bring to many of them the fruits of modern rehabilitative science.

Research and Professional Education

Two other important National Foundation programs, energetically pursued in 1957, will be expanded in 1958. To its scientific research program, which made possible the development of the Salk vaccine, will be allotted $4,700,000 in the new year. Part of this sum will be used by Dr. Jonas E. Salk and his University of Pittsburgh associates to continue basic investigations on monkey heart cells grown in laboratory cultures, which may have a bearing on cancer research.

An additional $4,000,000 will be allotted in 1958 to professional and public education. This includes the National Foundation's program to finance the training of sorely needed doctors, scientists, physical therapists, medical social workers and other experts.

Student Column

So You Think You Might Like to Write...

Have you ever thought of writing an article or an original paper? When you do prepare an article based on your professional experience, you will undoubtedly hope to have it published. There are many factors that determine the destiny of a manuscript. Will it appear in print or will it be relegated to the "circular file?" The few suggestions that will be passed along to you here will not guarantee your success as an author of scientific literature... but if followed they may increase your chances of securing publication of your article.

Have Something to Write About

If you want to write, you must have something to say. The most important professional writing is the reporting of your own original work which will increase and implement the knowledge and skills of others. If what you wish to report isn't entirely new, try to present a fresh approach to the subject matter. Rewriting the results of research or observations made by others and presenting this as original work... is plagiarism; however, a thorough review of a subject, with all sources properly indicated and credited, can be a worthwhile contribution.

Read the Journal Whose Readers You Aim to Please

Every journal publishes information for the guidance of prospective contributors. Look at page 206 in this issue of the *Review* and read what your own journal requires of the contributor. You will see that three kinds of original papers will be considered: the feature article, which is several pages or more in length and which deals rather extensively with the subject presented; the case report which is a short paper concerned with a disease or a method of treatment as it relates to one or a small group of patients; and suggestions from the field, which concisely describe a device or piece of adapted equipment.

Studying the magazine beforehand will save you time and effort in rewriting for it will give you much of the information you need to submit a paper in an acceptable form. Study the journal carefully for appropriateness of the subject matter. An article must have appeal for the audience or readers of the journal in which it is to appear. For example, publication of a paper on "Heat Resistance of Erythrocytes" would be more appropriate in *Circulation Research* than in the *Journal of Bone and Joint Surgery*.

Consider the Reader

Who will be most likely to read your article? In the *Review*, the readership is composed primarily of physical therapists. When you make a positive statement, your reader has the right to assume that you have based it upon ample and sound evidence. Why write "There is considerable support from reliable and available sources to indicate that short-wave diathermy, prescribed within recommended dosages and time intervals and often used to relieve painful muscular conditions, has been quite effective in the treatment of sub-deltoid bursitis." Your readers will know that diathermy has recommended dosages and time intervals, and what they are. They also know what diathermy has been used for in the clinic. They have every right to expect that when you say it has been effective in the treatment of subdeltoid bursitis, it *has*. So why not merely say "Short-wave diathermy has been effective in the treatment of subdeltoid bursitis." If you want to back up that statement, use a superscript numeral (See Information for Contributors) and cite the source(s) of the information in your references.

Anyone interested can then check your references and won't be required to wade through hundreds of unnecessary words. Telling an automobile fancier that a Cadillac is larger than a Ford is an insult to his intelligence. Telling a physical therapist that the soleus is a muscle is just as bad. Remember, the Gettysburg Address contains just over 250 words, the Ten Commandments about 300 words, but a government di-

rective concerning Material Handling in Public Refrigerated Warehouses may contain more than 20,000 words!

TYPEWRITER PARALYSIS—A FATAL SYMPTOM

In conversations with friends and associates, most of us have no trouble in getting out points across. But often when we try to put the same thoughts down on paper, we get hopelessly involved in fancy language. The twopenny word which will satisfy the intended meaning is always better than the half dollar word, so rare that it may only be found in the unabridged dictionary. Write as if you were talking, but make it more formal and impersonal. The brief sentence which makes its point is far better than the long entangled sentence which invariably says too much. The period may be your best friend . . . don't desert it in favor of the comma, semicolon or dash. . . .

IT'S THE LITTLE THINGS THAT COUNT

Your Editorial Board received two papers at the same time about identical subjects. One was neatly typed with good margins, double-spaced, on business-size white bond paper. The other had uneven margins, was single-spaced, full of erasures and finger prints, and the pages were unnumbered. You don't have to be told which one was accepted.

Before your article appears in the magazine, more than 20 persons will have had a role in preparing it for publication. Received and acknowledged by the Managing Editor, your manuscript will be routed to the Editorial Board, possibly to special reviewers, and then returned, if accepted, to the Managing Editor whose task then is to edit the paper for clarity and readability and to mark the manuscript for the printer. At the printer's, linotype operators and compositors, proofreaders, and copyholders play their roles. Returned to the Managing Editor, the galley proofs will be read by the *Review's* editorial staff and a copy will be sent to you for your approval and corrections.

In view of the number of persons concerned with the pages over which you have labored, it is remarkable that only rarely does a journal lose a paper. But when one does get lost, it usually gets lost but good! Therefore, when you type your paper, make at least two carbon copies. Submit the original plus one of the carbons to the journal, and keep one in your own files. You will need this last one when the galley proofs are sent back to you for correction and approval.

Anything you publish will reach a large, and for the most part critical, audience. These people will not know you except as you are represented by your article. It is to your advantage to make it the best it can possibly be. The Editorial Board of the *Review* is always happy to consider original papers and to give the authors guidance and help where it is needed. In addition to this service, the American Medical Writers Association has a medical editing service which is available to you at a nominal cost.

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Please direct all inquiries regarding tuition, entrance requirements and other specific information to the school and *not* to the American Physical Therapy Association.

Abstracts

Is There a Pyramidal Tract?

Paul C. Bucy (Northwestern University School of Medicine, Chicago), BRAIN, 80: 376-392, September 1957

"This paper is devoted to an analysis of the terms 'Pyramidal Tract' and 'Pyramidal Syndrome,' and a plea that they be discarded." With this statement the author introduces an analytical discussion of these terms, and also presents the reasons for their proposed abandonment.

The "pyramidal tract" by definition is composed of the fibers which pass downward through the pyramids on the ventral surface of the medulla oblongata. It is generally regarded as one of the most clearly defined and most important neural structures. It is generally believed to be responsible for muscular activity and for the inhibition of postural reflexes; its destruction gives rise to a group of symptoms known as the "pyramidal syndrome" (spastic paralysis without atrophy, hyperreflexia, absent abdominal reflexes, and the sign of Babinski). Available evidence shows these concepts to be erroneous and an impediment to further progress in our understanding of the neural mechanism responsible for motor activity.

The "pyramidal tract" as a unified entity does not exist. The author cites investigations by a number of workers of the past 25 years to support this statement. The concept that paralysis typical of the "paralysis syndrome" or of lesions of the "upper motor neurons" is not associated with muscular atrophy is a false one, as demonstrated by a series of experiments by Tower (1940), Bucy (1949), and others. Furthermore, according to the author, the "pyramidal tract" is not solely responsible for voluntary muscular activity, nor does it inhibit or control the postural or stretch reflexes. Also, its destruction is associated with some degree of muscular atrophy.

Four case histories are presented in which the patients underwent surgery for the relief of tremor and other severe involuntary movements. Various portions of the cerebral peduncle were sectioned. These 4 cases, together with related cases from the literature, demonstrate that section of the medial (fronto-pontine tract) and lateral (parieto-pontine fibers?) segments of the cerebral peduncle is largely without effect upon either normal or abnormal activity of the skeletal musculature. Section of the central half of the cerebral peduncle which contains the corticospinal fibers has a marked effect in abolishing or reducing abnormal involuntary movement. However, such a section does not produce the spastic paralysis with hyperactivity of the tendon reflexes as one has been led to expect from past teachings. Some of these patients have nearly normal muscular activity, even of the individual digits of the affected extremities.

In conclusion, the author reiterates his plea for the abandonment of the terms "pyramidal tract," "pyramidal syndrome," and "extrapyramidal tract or system." ("Extrapyramidal" would fall of its own weight if "pyramidal tract" did not exist). Dr. Bucy further urges renewed effort be made to discover and define the neural mechanism responsible for the control of skeletal muscular activity.

Actinotherapy—What Are its Indications in Dermatology?

Maurice Sullivan (11 E. Chase Street, Baltimore), A.M.A. ARCH. DERMAT., 76: 634-647, November 1957

A brief historical background of the use of ultraviolet and infrared from 1800 to modern times is given. The author states that there is much in the literature dealing with actinotherapy which is unproven and untrue. Many dermatologists take a dim view of actinotherapy and consider it a method of limited value. However, many general practitioners, physical therapists, and some dermatologists are regularly administering this type of treatment. Also, it is being extensively employed by beauticians, barbers, health clubs, industrial plants, large business offices, and as self treatment at home. The author feels that it is the duty of the physicians in this specialty to assume a position of leadership in the investigation of this form of physical therapy and to critically view and plan controlled experiments to determine the benefits and harmful effects of actinotherapy.

The intensity output of various ultraviolet generators is discussed. The physiological and chemical effects are outlined.

A number of common indications for treatment are outlined. The author states that it would be an endless task to discuss all of the skin diseases for which actinotherapy has been recommended and tried.

He is convinced that the potentialities of actinotherapy have not been sufficiently appreciated by the dermatologist. A logical approach is a thorough investigation with good technics and controls employing monochromatic generators to produce particular wave lengths with specific biologic effects at definite levels in the skin. Numerous alleged claims of various physiological effects should be reinvestigated by dermatologists because the therapeutic recommendations are based upon these claims. In the maze of exaggerated benefits attributed to actinotherapy there are almost certainly a few genuine indications which have been overlooked.

Bilateral Ulnar-Nerve Palsy

Luis P. Sanchez-Longo (2043 37th Street, N.W., Washington, D.C.), N. ENGLAND J. M., 257: 1071-1073, Nov. 28, 1957

This report is concerned with the uncommon syndrome of isolated bilateral symmetrical ulnar-nerve palsy. The author considered the report of three cases important because of the difficulty in establishing a definite cause and site of injury and the serious neurologic conditions which must be considered in the differential diagnosis.

Unilateral ulnar-nerve palsy is a fairly common clinical condition encountered frequently in both medical and surgical services of a general hospital. Many etiologic agents are now known to be involved, either in the form of a mononeuropathy or as part of a generalized polyneuropathy. On the other hand bilateral ulnar neuropathy is uncommon, and the world medical literature concerning this problem is limited. Textbooks on neurology for the most part mention that such a condition occurs and refer to osteoarthritis as the most likely cause. Other causes for isolated bilateral ulnar neuropathy described in the literature include bilateral trauma to the elbows (either fractures or contusions), bilateral ulnar subluxation and systemic infection (typhoid fever or leprosy).

The most likely pathogenesis for each of the 3 bilateral ulnar-nerve palsy cases reported in this article are discussed: (1) injury of nerve at plexus or at elbows from automo-

bile accident, (2) contusion of both elbows or marked stretching of ulnar nerve by bilateral forced flexion of elbows from automobile accident, and (3) diabetic neuropathy.

The syndrome of bilateral ulnar-nerve palsy should not be difficult to differentiate from degenerative diseases like amytrophic lateral sclerosis and progressive spinal muscular atrophy, and from neuritis of the deep palmar branch of the ulnar nerve, since these conditions are characterized by absence of sensory impairment. In addition, the cases of pressure neuritis of the deep palmar branch of the ulnar nerve that have been reported in the literature have all consisted of unilateral involvement, without wrist weakness and with a history of pressure trauma to the palm of the hand.

Follow-up at two, four, and six months showed either increase of muscular strength or improvement of sensory impairment. Treatment consisted of physical therapy, thiamine hydrochloride, multivitamins and, in the diagnosed diabetes case, with insulin.

Whiplash Injuries of the Head and Neck

C. D. Hawkes (University of Tennessee College of Medicine, Memphis), A.M.A. ARCH. SURG., 75: 828-833, November 1957

Most "whiplash injuries" to the head and neck result from automobile accidents, particularly rear-end collisions.

In rear-end collision, the body is abruptly thrown into forward motion from rest. The head, neck, and upper thorax lag through their own inertia and are subjected to a peak of force at the limit of their stretch (hyperextension) as they drag along after the body. The driver's grip on the steering wheel may lessen the effects on the shoulder girdle. After the vehicle stops, the body still continues forward, decelerating to a fairly abrupt stop, either from reflex bracing or from striking the steering wheel. The head and neck are whipped forward to suffer another shock of force at the limits of hyperflexion. Finally at termination of flexion, the head and neck are whipped back into hyperextension. A description of initial flexion occurring due to a thrust from behind is not compatible with principles of medical physics.

The head, though it may not strike anything, is subjected to considerable force of acceleration and deceleration and to stress at the atlanto-occipital joint. Patients often describe being stunned, blacking out, or they may sustain actual concussion. Neck muscles and ligaments undergo stretch, strain, and maybe actual tearing. Cervical arteries, nerves, spine, intervertebral disks may be injured. The upper thoracic spine may suffer stretch and strain from hyperextension and then hyperflexion, if the arms are free. Nerves of the brachial plexus may be injured from stretch and strain of shoulder girdle muscles.

Hospitalization may be indicated for concussion or severe neck strain. Hospitalization for minor neck sprain may heighten emotional distress. X rays should include right and left oblique views of cervical flexion and extension in addition to conventional anteroposterior and lateral views. Rest, heat, massage, sedatives, and analgesics are efficacious for injured muscles and ligaments. Traction may relieve marked muscle spasm, but long-continued use may prolong disability. A Thomas collar or neck brace for a few weeks may benefit severe neck sprain especially if resumption of activities necessitates much driving or riding. However, the collar or brace may become a lingering prop or crutch. Once acute spasm has been allayed, rehabilitative exercises for neck, shoulders, and upper back are more effective.

Patient evaluation should consider psychosomatic complications and malingering problems in the light of concurrent personal injury litigation. Medicolegal considerations in the management of whiplash injuries by the physician are thoroughly discussed.

Backache—Differential Diagnosis

Kenneth Christophe, (Department of Orthopedic and Fracture Surgery, Boston University, Boston, Mass.), MED. CLIN. N. AMERICA, 41:1267-1286, September 1957

In this article the author discusses the many possible causes for the common condition, backache.

Acute back pain is first considered; usually of rapid onset preceded by some trauma with the thoracic region seldom involved. Pain may subside or persist but occurs most often in quick movement, being alleviated by bed rest. Fractures may be present without severe pain; and muscle spasm with tenderness over the spinous processes may be the first indication.

Whiplash is the most common acute injury in the cervical spine bringing about limited range, muscle soreness, and spasm. Weakness, diminished sensation, and radiating pain may be indications of disk protrusion. Acute stiff neck, if uncomplicated may be relieved with heat and bed rest but if this stiffness persists, degenerative disk lesions or vertebral lipping might be suspected.

Older people experience chronic cervical pain which increases with activity and fatigue. Neck supports and strengthening exercises may relieve muscle tension.

Acute thoracic pain may be due to fracture or strain, the latter differentiated by lack of tenderness over the spinous processes. Overstretching of the smaller joints of vertebral segments often produces pain on coughing, sneezing, or deep breathing with radiation of pain to the anterior chest. Vague pain sometimes precedes sudden collapse of vertebrae in senile osteoporosis. Hormone therapy usually decreases chance of further vertebral body collapse. Gall bladder may also give evidence of acute thoracic pain, bed rest but not muscular activity tending to increase it.

Chronic thoracic pain is a possible indication of scoliosis, vertebral epiphysitis, or senile kyphosis. Onset of pain is gradual and often diagnosis is made following routine chest X ray. Spontaneous fusion in senile kyphosis eliminates pain without surgical intervention in many cases.

Infections of the thoracic spine may be complications of typhoid fever or undulant fever, with signs of infection usually found elsewhere in the body. A positive Mantoux test plus signs of low grade infection indicate possibility of tuberculosis of the spine. Fusion and plaster jackets previously used for treatment are being supplemented or replaced with drug therapy.

Rheumatoid spondylitis, occurring earliest around the sacroiliac joint is one most commonly misdiagnosed. Limited motion, especially after rest, referred pain, and characteristic X rays help pin-point this condition.

In the lumbar and lumbosacral spine back pain is common following heavy lifting, as a result of chronically poor posture, and in presence of congenital abnormalities. Ruptured intervertebral disks are

always difficult to diagnose and to treat, the first manifestations often being pain radiating down the posterior thigh and calf, with subsequent sensory changes. For all low back abnormalities, conservative treatment in the form of bracing, exercises, and application of heat is prescribed first, with surgery used only on persistence of symptoms.

Other conditions of the spine giving rise to pain are vertebral lipping, myeloma, osteitis deformans, coccygodynia and metastasis to the spine. In the latter, pain often occurs in the spine before the primary lesion is discovered elsewhere. In Petit's triangle, the latissimus dorsi and external oblique muscles may compress a protruding fat pad and pain is best relieved by removal of the fat pad.

Low back pain is often the first indication of visceral lesions. Occasionally the first examination reveals nothing, but examination should be repeated after an interval of time before symptoms are considered merely psychoneurotic.

The author considers examination of the patients of extreme importance. Detailed history, palpation of musculature, measurement of leg length, examination of spine alinement, and flexibility in many positions plus constant referral to X rays may determine the correctness of the differential diagnosis of backache.

Restoration of Upper Limb Function After Radical Mastectomy

Norman C. DeLarue (Faculty of Medicine, University of Toronto, Toronto), GERIATRICS, 12: 633-641, November 1957

There are two schools of thought among surgeons who believe that surgical management is preferable in selected cases of mammary carcinoma. Those who favor simple mastectomy stress that this procedure results in better wound healing and in less shoulder stiffness and arm swelling; therefore, proponents of the axillary dissection must devise methods to minimize such complications and bring the incidence of postoperative morbidity into competition with the "simpler procedure." The author feels that in most cases the radical mastectomy, performed at the earliest possible moment, is the best form of surgical treatment.

Fundamentally, postoperative dysfunction stems from development of edema in the operative field, in the shoulder joint, or in the arm itself. It is generally accepted that lymphatic obstruction is one of the responsible factors. Another important factor is resistent staphylococcal organisms which may be responsible for postoperative infection. Both infection and edema must be controlled if permanent shoulder stiffness and arm swelling are to be avoided.

Lymphedema may occur immediately after operation or develop after a delay of several days, usually at the time when an active exercise program is increasing the functional demands upon the upper extremity.

The first type, which is immediately postoperative, reflects an anatomic defect with initial insufficiency of the collateral lymphatic circulation. During this period the degree of swelling can be minimized by taking advantage of the effect of gravity drainage during recumbency and elastic compression and support during brief periods of dependency of the arm. Use of the arm should be avoided except for careful'y supervised periods of specific exercise designed to prevent loss of range of motion until more normal activity may be permitted.

Delayed swelling denotes lymphedema resulting from any of one or a combination of three postoperative complications: (1) interference with wound healing, (2) accumulation of serum under the skin flap, or (3) the presence of infection. These presumably all act in the same manner by increasing the inflammatory reaction within the operative field, thus increasing eventual scarring and lymphatic occlusion. Infection is the most important of the three factors, co-existing as it does almost invariably with the other two. Treatment by antibiotics, suction drainage, and compression may help to reduce the complications.

Immediate postoperative shoulder activity is to be condemned and, particularly abduction which tends to tent a snug flap away from the dome of the axilla. Active shoulder exercises are not begun until healing of the wound in all various phases is well under way usually in five to six days. An arm sling may be used during this period of inactivity.

Although successful wound healing takes precedence over all other considerations, shoulder joint function can not be neglected for long without the possibility of some permanent limitation of motion or impaired function, especially abduction and external rotation. Beginning 48 hours after operation, motions of the elbow, forearm, wrist, and hand may be done.

When permitted by the progress of healing, the recumbent patient places both hands behind the head and with the hands held behind the head, horizontally abducts the normal arm and then the affected arm. From this position of horizontal abduction, the elbow on the normal and then on the affected side may be extended and held for a minute or two before lowering the arm. Functional use of the upper arm within limitation of range of motion should be stressed. Activities of hair combing, washing of the face, and eating are encouraged.

When bed exercises are mastered, be prescribed. Pendulum exercises, exercises in the erect position may stressing abduction and adduction are useful. Overhead pulleys may be used to increase the range of extension or abduction. A finger ladder or "wall-climbing" may be used to advantage. Continued and increased functional activities are important during this period. Without complications it may be possible to gain full range of shoulder motion on the eighth postoperative day.

Effect of a Tranquilizing Agent on the Galvanic Skin Response

F. B. Benjamin, K. Ikai and H. Clarke (Department of Physiology, University of Pennsylvania and Aviation Acceleration Laboratory, Johnsville, Penn.), J. APPL. PHYSIO., 11: 216-218, September 1957

The galvanic skin response (G.S.R.) is an automatic response which is so much under the control of the cerebral cortex that it can be considered an indication of the emotional tension of a subject. Tranquilizing agents are supposed to decrease emotional tension. This study is an attempt to determine whether or not the G.S.R. might be an indication of the effect of tranquilizers on emotional tension. The ataraxic drug used was preclorperazine in 10 mg doses. The control group received 10 mg of phenobarbital to match the slight side effects produced by the ataraxic drug. A third group received no medication.

The G.S.R. was recorded for 30 minutes to establish the base level and then the drugs were administered. A burn pain of an intensity of 4 dols and an ischemic pain of 8-10 dols were given to each subject.

The results showed that prochlorperazine decreases the G.S.R. but only slightly more than a small dose of phenobarbital.

Other workers have shown that the G.S.R. shows marked adaptation. Significant adaptation was shown in this study only for the base level. There were some changes which the authors believe might be due to individual susceptibility to the drug.

The Exposure Method in the Treatment of Burns

George T. Van Petten, (U. S. Naval Hospital, Newport, Rhode Island), A. M. A. ARCH. INDUST. HEALTH, 16: 416-421, November 1957

This paper deals primarily with the management of burned surfaces with the exposure technic. The Cocoanut Grove, Texas City, and Hartford circus fires are stark examples of severely burned patients in large numbers. The possibility of atomic explosion could confront us with an even more staggering burn problem. The exposure technic of managing the burned surface is well suited to such a catastrophe. It may be the only workable means of treating large numbers of casualties with limited trained personnel.

The treatment of burned surface is secondary to the patient's general condition and should be deferred until his condition is stable. The exposure method consists of leaving the burned surfaces open to the air with the resultant formation of a dry, protective eschar. No medication is applied, but the burn is not ignored. There are several marked advantages. Stockpiles of sterile dressings are not needed. Trained personnel and operating rooms are free to administer to other needs of the patients. The tourniquet effect of dressings on respiration and limbs is eliminated. The temperature regulatory mechanism is not hampered. Patient's morale is better, since the extent of the burn is not exaggerated by a circumferential dressing. Odor is almost absent. Most important of all, infection is markedly reduced. Deep second degree burns are not subject to the threat of maceration, with resultant conversion to full-thickness injury. Normal adjacent tissue is not threatened with infection.

Initially, the patient is placed on a sterile or freshly laundered sheet. Burned areas are débrided gently with removal only of loose materials and then cleansed. No antibiotics or other agents are used locally. Blisters are initially left intact. After 48 to 72 hours a dry coagulum forms. The burned areas must be inspected daily. With any sign of infection or significant temperature elevation, further débridement is done, and infected blisters are removed. The eschar overlying superficial partial thickness burns begins to peel in 10 to 14 days, leaving new firm epithelium. Over full-thickness burns the eschar remains intact for 12 to 15 days. When the eschar becomes moist, daily dressings are applied in preparation for grafting.

Certain areas of the body require special attention in exposure technic. Hands and arms should be maintained at mild elevation. To prevent contractures active motion should be performed in a warm saline bath after 72 hours, or when the eschar begins to crack. This should be done for 20 minutes, twice a day. In the interim they may be left exposed in elevation to prevent edema. Burns of the anterior neck, of the chest, and the lower face should be maintained with the neck in extension to minimize flexion contractures of the neck. In circumferential burns, the patient must be turned, preferably on a Stryker frame at 4-6 hour intervals. Once the coagulum is formed, turning must continue or breakdown occurs. One disadvantage to the method is that a hospital or warm building is necessary for 72 hours until a coagulum forms. The other disadvantage more psychological than real, is that the patient's family and friends feel that the patient is being neglected with his burned areas uncovered and untreated, but since the patient does so well the family's fears are usually allayed before many days.

Reading Epilepsy

A. Bingle (Department of Neuropsychiatry, Brooke Army Hospital, Fort Sam Houston, Texas), NEUROLOGY 7: 752-756, November 1957

Reading epilepsy apparently belongs to a special group of epilepsies which depend on a specific precipitating factor, similar to musicogenic epilepsy, certain cases of photogenic epilepsy, and perhaps writing epilepsy. It is suggested that this group should be called exogenously precipitated epilepsies. There are definite characteristic features of this group of epilepsies. They are all precipitated by a specific factor such as reading, music, light, writing, and even by smelling and tasting. Seizures can be suppressed by actively decreasing attention or participation toward the precipitating factor. Anticonvulsant medication is usually ineffective. Lack of sleep and fatigue are factors, and it is usually assumed that an underlying susceptibility to seizures without true focal signs exists.

Three cases are described in which organic convulsive attacks of the grand mal type were precipitated by reading. In 1 case the period of reading was rather short and in 2 others epileptic attacks were provoked after prolonged reading. In these latter cases it was assumed that the fatigue factor was present.

As to the possibilities of the mechanics, it is thought that a lesion within the optic pathways could be an important pathogenic factor in reading epilepsy.

Peripheral and Visceral Vascular Effects of Exercise in the Erect Position

K. Harpuder, M. Lowenthal and S. Blatt (Department of Physical Medicine and Rehabilitation, Montefiore Hospital, New York, N. Y.), J. APPL., PHYSIOL., 11:185-188, September 1957

Using able bodied male subjects between 25 and 30 years of age, the effect of exercise upon the blood flow in the forearm, hand, kidney, and liver was studied in the supine and erect postures. The exercise work load varied from 3500 to 9000 kg-m in 15 minutes. The exercise in the erect posture was performed either seated in a chair or on a bicycle ergometer. The effect of a heavy protein meal consisting of one pound of steak and vegetables in combination with exercise was also studied.

Blood flow in the forearm and hand were measured by venous occlusion plethysmography. Kidney flow was measured with P.A.H. clearance without catheterization. Liver flow was approximated with Bromsulfalein infusion.

The skin circulation is known to decrease on assuming the erect posture and momentarily at the onset of exercise and finally undergoes a marked increase in response to requirements of heat regulation. There is general agreement that with mod-

erate to heavy exercise there is a decrease in kidney blood flow proportional to the severity of the exercise. There are no adequate studies available on the effect of posture and exercise on the circulation of the liver and inactive muscle.

Results of these experiments showed no significant change in blood flow in forearm with the change of position. Light work with a load of 3500 kg-m showed no change in liver and kidney circulation over those shown in the supine position in a previous study. With heavy work of 9120 kg-m there was a considerable decrease in kidney blood flow but no change in liver flow. The heavy protein meal did not have any effect.

The authors concluded that the concept of vascular adjustment of shifting of blood to active areas during exercise requires a clearer interpretation. The organs examined tend to maintain their resting blood flow during mild and moderate exercise. Inactive areas do not share the increased cardiac output. In the presence of higher systolic pressure this means local vasoconstriction. No proof was obtained that position has an influence on energy expenditure during the performance of simple unskilled work.

More precise definition of the threshold of stress which results in redistribution of blood from the inactive areas awaits the development of more sensitive nontraumatic technics for the measurement of circulation in the organs discussed.

Dry Aluminum Powder Therapy for Thermal Burns

Marvin D. Maxmen, (Friementte Court, 740 Kennedy Road, Toronto, Ontario), A. M. A. ARCH. INDUST. HEALTH, 16: 414-415, November 1957

In the majority of centers in which large numbers of thermal burns are treated, the exposure method has supplanted the occlusive dressing method as the treatment of choice for the local burn wound. In spite of a number of apparent disadvantages, it was accepted at this center as superior for the majority of cases. The serum clot as it developed unaided, tended to be very fragile and cracked readily, particularly across joints. Once the cover was broken, serious infection could occur rapidly beneath the crust. Traction and suspension have been applied to minimize this possibility. Antibiotic powders have been applied with questionable benefit. In general, circumferential burns were not considered suitable for exposure, and treatment was limited to the hospital inpatient. If anything, more nursing care was required than with the occlusive method. If by some means, the serum eschar could be formed more rapidly and rendered more durable, these disadvantages would be largely overcome.

In 1947, during the testing of various metallic powders, the astringent coating effect of aluminum powder was noted. Clinical trials, combining dry aluminum powder with exposure, were undertaken in 1952, using four samples of aluminum powder differing in particle size. These were supplied by Dr. Dudley Irwin, Medical Director of the Aluminum Company of America, in Pittsburgh. A mean particle size of 50 microns formed a satisfactory cover on the burn surface and has been under trial for five years. The powder is sterilized by baking in a dry heat for two hours at 320 degrees F. After the burn surface was cleaned, blisters broken and loose skin débrided, the powder was dusted on. A bright, moist metallic aluminum cover forms at once. On the ward, the powder was applied by the nurse when necessary to keep the surface dry. A tough, dry, pliable, painless aluminum eschar covers the débrided burn area. This cover bends rather than cracks. In circumferential burns, surgical towels heavily dusted with aluminum powder are placed beneath the patient to prevent contact with the bed linen allowing the eschar to form. Deep burns tend to form a characteristic thicker ripple cover, allowing early differentiation of depth. In deep circumferential burns it may be necessary to split the eschar about the body to allow freer respiratory excursion or about the extremities or digits because of circulatory impairment due to tourniquet effect. The eschar gradually separates from the edges, with complete healing of second degree burns in from 8 to 12 days. The adherence of the eschar beyond the 14th day is diagnostic of deep burns. This eschar can be readily removed using scissors and forceps, by the 16th day without traumatizing the underlying surface. Wet dressings are used in preparation for skin grafting. No adverse reactions to aluminum powder, either local or systemic, has been encountered.

In some cases, inpatient care is given only until a dry cover is obtained, with subsequent treatment handled with ease on an outpatient basis. In addition to the inpatient group of approximately 600 cases treated, a large number of minor burns have been treated on an outpatient basis completely. A number were left exposed and the parents instructed to apply aluminum powder to them. In spite of extending this experiment to a relatively large number of burns, complications did not develop, suggesting that exposure therapy, if necessary, might be feasible on an ambulatory basis.

Medical Management of Peripheral Ischemic Diseases

Edgar A. Hines, Jr. and Ray W. Gifford (The Mayo Foundation, Rochester, Minnesota), AM. J. MED. 23: 724-729, November 1957

Two important principles in treatment of *acute* arterial occlusion are: (1) relax the arterial spasm as soon as possible, and (2) institute measures promptly to prevent further thrombosis. The first principle is related to the spasm of unoccluded arteries which commonly accompanies the acute occlusion. This is a contributing factor to the immediate severe ischemia of the limb and may also cause severe damage in the endothelium of the arteries distal to the occlusion. Prevention of further thrombosis is indicated in view of the possible development of thrombosis at the site from which an embolus was attached or in the affected arteries after the spasm relaxes.

Local heat and elevation of the extremity following sudden arterial occlusion are inadvisable. Among the important points listed in the medical treatment of sudden arterial occlusion are prompt treatment following an early diagnosis, use of the Sanders oscillating bed or elevation of the head of the bed, a room temperature of 80 to 90 degrees F., intravenous injection of a relaxant, and administration of anticoagulant agents. When the extremity has been saved, great care must be taken to avoid local injury which may cause local gangrene and loss of the limb.

Medical management of chronic occlusive arterial disease is much the same regardless of the cause of the ischemia. Once major arteries have been occluded, they tend to

remain so in spite of any medical treatment presently available. An exception to this is thromboangiitis obliterans in which recanalization of the occluding thrombus occasionally occurs. The objective of medical treatment then is to take maximal advantage of collateral circulation by eliminating spasm in the arteries and promoting dilatation of collateral channels. Inasmuch as tobacco produces constriction of small arteries and arterioles, thereby compromising collateral circulation, abstinence from tobacco is a helpful adjunct to treatment of all types of occlusive arterial disease. For use in dilating the peripheral arteries, the authors found that 1 or 2 ounces of whiskey, before meals and at bedtime is as good as, and perhaps superior, to any of the peripheral vasodilating drugs presently available.

Mechanical methods include postural or Buerger's exercises advocated as helpful in improving circulation. It is doubtful that such exercises are of sufficient value to warrant their routine use. The Pavex boot, along with apparatus to produce intermittent venous occlusion, has been largely abandoned. Only rarely is it advantageous for the patient to purchase a Sanders oscillating bed for home use. The syncardon which applies external pressure in a peristaltic fashion synchronous with the pulse wave has not been adequately tested.

A warm environmental temperature tends to promote vasodilatation. A thermostatically controlled heating unit placed over ischemic feet often stimulates the blood flow to them. Heat must never be applied directly to ischemic extremities. The source of heat in a unit usually consists of one or more 25 watt electric light bulbs and the temperature within the box should never exceed 90 degrees F.

Pain due to ischemia is another factor to be considered. The *pain of intermittent claudication* is more troublesome than severe and usually patients can be taught to live with it and are content to do so if they are reassured about its significance. They can walk to tolerance as frequently as desired without harm and they learn that they can walk farther if they walk slower. Proper care and hygiene of the feet are extremely important. Medical treatment of intermittent claudication is not satisfactory.

Rest pain of ischemia includes pretrophic pain, pain of ulceration and gangrene, and pain of ischemic neuropathy. These pains are severe, are worse at night and are resistant to narcotics. Persistent severe rest pain of ischemia is an ominous sign for survival of the limb.

In medical management of the chronic occlusive arterial disease, there is nothing more important than proper care and hygiene of the ischemic extremities. It is estimated that gangrene can be prevented in more than half the cases in which it leads to amputation, if proper precautions are exercised.

The treatment of chronic occlusive arterial disease leaves much to be desired and it is likely to remain unsatisfactory until fundamental knowledge concerning the cause and pathogenesis of the arteriosclerosis, thromboangiitis, and thrombosing tendencies is available.

Peripheral Nerve Tumors as a Cause of Pain in the Lower Extremities

Sidney W. Gross and Aaron Schwartz (Neurosurgical Service, Mt. Sinai Hospital, New York) NEUROLOGY 7:711-715, October 1957

Neoplasms of the peripheral nervous system are an uncommon disorder and as such are often looked upon as lacking in general interest except to the specialist in that field, which is unfortunate.

The most common solitary tumor found on a peripheral nerve is a perineural fibroblastoma. Many authorities have studied and debated the origin of these tumors; whether the growth takes origin from the neurilemmal sheath of Schwann, perineurium, or epineurium. The most convincing evidence, however, points to the fibroblastic nature of the cells making up this tumor.

The clinical symptom of a peripheral nerve tumor may be local pain at site of tumor. This pain radiates along the course of the nerve. On palpation the tumor is movable from side to side, but not movable in the long axis of the nerve; it is round, smooth and well demarcated. Pain produced by these tumors is fairly constant and not alleviated by rest, heat, or cold. There may be no sensory or motor deficits if the tumor is benign.

The treatment of these tumors is surgical removal. The nerve proper usually does not enter the tumor mass, but is usually displaced laterally or may surround the mass, so that a good cleavage plane is frequently found and the functional integrity of the nerve is unaltered. In these cases the tumor may be enucleated without resection of the nerve trunk. Where there is absence of a good cleavage plane or in the question of malignancy, resection should be carried out and end-to-end suture done.

The real issue here is the importance of a careful examination of patients with unilateral extremity pain. Solitary tumors are often overlooked, mainly because they are not considered as a cause of pain and also because careful and complete palpation of the peripheral nerves is often neglected. In the four case histories listed in this paper, the tumor was discovered by the patient in three instances. The pain in these four cases was constant and intractable. The pain, though not as severe as causalgia, somewhat resembled this disorder. The pain occupied the center of consciousness during every waking moment so that the victims were soon completely demoralized and constantly demanded medication for relief. The removal of the tumor was followed by complete relief of pain or by a marked improvement.

Association of Pulmonary Tuberculosis With Ankylosing Spondylitis

A. J. Lea and J. D. Abbatt (Ministry of Pensions and National Insurance, Norcross, Blackpool, England) Lancet, 2: 917, Nov. 9, 1957

This paper is concerned with an investigation into the incidence of pulmonary tuberculosis in ankylosing spondylitis. The material used consisted of 1,981 cases of ankylosing spondylitis in which the patient was pensioned for that disease by the Ministry of Pensions and National Insurance during the period Jan. 1, 1940 to Dec. 13, 1953.

Comparative cohort analysis was carried out, the number of man-years lived by the series found, and the expected number of notifications calculated. The expected number was 22.6; the number of cases actually notified was 47. The odds against such an excess being due to chance are greater than 1,000 to 1. The authors, therefore, conclude that ankylosing spondylitis predisposes to the development of pulmonary tuberculosis. The obvious explanation of this is fixation of the thoracic cage, although the findings

of another investigation present the possibility that the reason may be more obscure and as yet undetermined.

Observations Upon Responses to Digital Carotid Artery Compression in Hemiplegic or Hemiparetic Patients

I. E. Webster and F. S. Gurdjian (The Grace and Memorial Hospitals, Detroit), NEUROLOGY 7: 757-762, November 1957

Temporary digital carotid artery compression is a valuable and safe neurologic test for identifying occlusive cerebral vascular disease, particularly when hemiplegia or hemiparesis is recently present or developing. This carotid compression test has now been cautiously employed in several hundred patients in all age groups with the following results.

When syncope is induced by temporary digital compression on the side of the paralysis or paresis, contralateral carotid occlusive disease is probable. This response is not accompanied by a heart block, characteristic of the carotid sinus reflex, although heart slowing may occur. When syncope does not occur, there is a likelihood of a nonvascular type of neurologic lesion caused by a brain tumor, inflammatory or degenerative disease, or trauma. If syncope occurs upon compression at the right and left carotid bulbs, the occlusive disease of the basilar artery, complete or partial, is likely. Partial bilateral carotid occlusion will also give this type of response.

The occlusion of an anterior cerebral artery is usually accompanied by syncope upon contralateral compression, although there is angiographic filling of both arteries above the communicating artery of the compressed side.

Syncope usually does not occur in patients with hemiplegia due to middle cerebral artery trunk occlusion, if a long-standing carotid occlusion is present or if the angiographic (both cerebral and cervical) pattern appears to be normal. In the latter instance, small artery involvement by arteriosclerosis may exist.

One hundred responses have been correlated with angiographic and neurologic findings. Misleading responses occurred in 16 cases. These included the occurrence of syncope in elderly patients with mass lesions, in brain tumor patients when choked disks were present, or when a "sensitive carotid sinus" existed. Digital carotid compression is definitely an aid in the diagnosis of cerebrovascular failure.

Spontaneous Return of Function Following Surgical Section or Excision of the Seventh Cranial Nerve in the Surgery of Parotid Tumors

H. Martin and J. T. Helsper (Memorial Hospital, New York, N. Y.), ANN. SURG., 146: 715-727, November 1957

Clinical evidence of 8 cases of spontaneous recovery from facial paralysis forms the basis of this report. In all cases the parotid tumor was not resectable without removal of from 2.5 to 5 cms. of the main trunk and the adjacent plexus of the seventh cranial nerve. No attempt to resuture or to graft was made. There was immediate and complete paralysis of corresponding facial musculature. Since the surgeon had no hope of return of function, no physical therapy (faradic stimulation) was given.

The interval between operation and the first sign of recovery ranged from 6 to 35 months. First evidence of motion was voluntary retraction of the angle of the mouth. Once initiated, functional recovery proceeded steadily. Voluntary motion became more pronounced and extended selectively to the lower lip, cheek, and finally the orbicularis oculi and frontalis. The droop of the angle of the mouth completely disappeared. Though some disparity remained between the two sides of the face on exaggerated motion, in facial repose the difference was so slight as to be unobjectionable. Recovery of motion is favored and hastened if the patient actively and consistently practices (daily) before a mirror. Several explanations for recovery after complete section and loss of substance of the seventh cranial nerve are discussed. Spontaneous regrowth of motor nerve fibers over an unbridged defect of from 2.5 to 5 cms. is considered unlikely. Advancing nerve fibers would have to join up with widely separated stumps of the distal plexus, and in such an exact manner as to permit selective action in the various facial muscles. If regrowth and reanastomosis were responsible for recovery, then re-excision of the parotid area would again interrupt neural pathways, and recovered active motion following the first operation would be lost. Clinical evidence showed that a second excision only temporarily interfered with the function regained after the first operation.

Decussation and/or anastomoses across the midline of the face is also discussed and likewise considered unlikely.

Detailed anatomy of the fifth and seventh cranial nerves reveals, significantly, elaborate anastomoses (plexuses) between terminal branches of these two cranial nerves in the facial musculature from the forehead to the lower lip. Six specific plexuses are illustrated and briefly outlined. It seems reasonable to conjecture that following complete and permanent interruption of the motor pathways through the seventh cranial nerve, voluntary motor impulses by reeducation may find their way from the cortex through the fifth cranial nerve to the respective facial muscles.

The frequency of spontaneous recovery (whatever the actual explanation) makes questionable whether any form of neurorrhaphy or extensive plastic repair (except eyelid fusion) for seventh nerve paralysis is justifiable until at least a year or more has passed. There is also considerable doubt whether any of the few recoveries following neurorrhaphy reported in the literature were actually due to that cause.

Comparative Thermoregulatory Responses of Negroes and White Persons to Acute Cold Stress

D. W. Rennie and T. Adams (Arctic Aeromedical Laboratory, A.P.O. 731, Seattle), J. APPL. PHYSIOL., 11: 201-204, November 1957

The higher incidence of frostbite among Negro personnel compared with white personnel during the Korean war raised the question of racial susceptibility to cold injury. Another author, on the basis of his studies concluded that the Negro has a physiologic basis for an increased incidence of cold injury.

This study extends these observations on the comparative response of these 2 groups to cold air exposure. Digital temperatures, rectal temperatures, and average skin temperatures were recorded. Body heat production was estimated from oxygen consumption. The subjects were exposed, clothed but with fingers and hands bare, lying supine on a canvas cot for 90 minutes at an air temperature of −12°C.

The results showed that the digital vascular response to cold is more severe in the Negro than in the white, and that cold vasodilatation is rare among Negroes. A rise in metabolism during the cold test was presumed due to shivering. Two of the major thermoregulatory responses to cold, cutaneous vasoconstriction and elevated metabolism differ in magnitude between the Negro and the white. The effect of cold exposure on local skin temperatures should reduce the tactile discrimination of the Negro group far more than the white group and probably would increase their susceptibility to local cold injury.

Effect of High-Intensity Focused Ultrasound on Nerve Cells in Spinal Cord of Mouse

David Bowsher (Department of Anatomy, University of Liverpool) A.M.A. ARCH. NEUR. PSYCHIAT. 78: 377-382, October 1957

This paper deals with the minute structural changes in the spinal cords of mice irradiated with ultrasound at a frequency of 2.5. mc. with a focused beam. This dosage was chosen because it was found to be the minimal paralyzing dose. The clinical response to this application of ultrasound varied from weakness to complete paraplegia, though monoplegia or monoparesis was the most frequent result.

Gross examination of the cords at time of removal revealed changes. Many of the cords were found to be extremely friable, so that they tore when cut with a microtome. The cords also appeared to be compressed dorsoventrally.

Microscopic examination showed several changes. There was a great decrease in cell population even at one hour. Cell depopulation continued to decrease up to 24 hours after which no further reduction took place. There was also a marked chromatolysis of the cells.

Several irregular cavities also appeared in the matrix, but due to the friability of the cord it was not determined if this was due to the ultrasound or to the cutting.

Examination of the surviving cells showed the greatest amount of change in the ventral horn cells; in fact, the surviving posterior horn cells showed no change in most cases. The affected ventral horn cells show blurred nucleoli and marked vacuolation of the cytoplasm. Some cells were reduced to ghosts. Vacuolation appears to increase with time becoming extreme at 24 hours. Examination of the cord at 30 days showed vacuolation still present in many cells which had returned to normal size and a glial reaction was evident.

It is evident that cell damage is out of all proportion to fiber tract damage. In all cases the meninges, ependyma, and dorsal root ganglion cells were normal. The nuclei of the glial cells appeared normal in appearance as well as the vast majority of blood vessels.

A Tracheostomy Guard

Norman Ames Posner (St. Vincent's Hospital, New York, N. Y.), N. YORK STATE J. M., 22: 3642, Nov. 15, 1957

The patient with a permanent tracheostomy is usually provided protection of the trachea by means of a gauze pad placed over the opening and tied around the neck. This pad acts as a substitute for the protection normally supplied by the nose and pharynx in that it screens out larger foreign bodies, provides an insulating substance which decreases heat loss from the body, and allows some warming of the inspired air. However, because the material is soft and pliable, it tends to act like a diaphragm moving into the trachea with each respiration, often causing an irritation to the mucosa and impeding respiratory exchange.

To overcome these problems a simple device worn directly over the tracheostomy like a pendant necklace is described. It is a meshed grill woven loosely of number 20 gauge silver wire. The over-all size is 4½ by 5½ cm. with the smaller squares approximately 1 cm. square. The cost is about 15 cents. This device aids the patient with a permanent tracheostomy in avoiding some of the serious dangers and disabilities inherent in the use of a protective gauze pad.

Our Abstractors for March

We are indebted to the following Association members for their assistance in the preparation of the abstracts appearing in this issue.

Joan Brewer — Ethel Coeling
Dorothy Briggs — Jean Cuthbertson
Sam Chelemsky — Dorothy Glidden
Mary Wood

Book Reviews . . . . .

Orthopedic Surgery in Infancy and Childhood. *By Albert Barnett Ferguson, Jr., M. D., Silver Associate Professor of Orthopedic Surgery, University of Pittsburgh; Chief of Orthopedic Service, University of Pittsburgh Medical Center; Senior Staff of Children's, Presbyterian and St. Margaret's Hospitals, Pittsburgh; Chairman of Medical Advisory Board, Harmarville Rehabilitation Center; Consultant, Orthopedic Surgery, U.S. Veterans Administration Hospital, Oakland and Green County Memorial Hospital, Waynesburg, Pa. Five contributing authors. Cloth; price $15.00. Pp. 508; illus. Williams & Wilkins Company, Baltimore, 1957.*

This orthopedic text covers the deformities usually seen by the surgeon, pediatrician, general practitioner, medical student, nurse, and physical and occupational therapists in ordinary office or clinic practice. A few of the syndromes are rare and unusual but these, too, have a place in a textbook such as this, since they aid a responsible person in recognizing and handling these problems expediently. The author has collected and organized his material in a regional manner, and has utilized the specialized knowledge of others, both by direct contribution and by extensive reference. The clarification afforded by excellent illustrations, roentgen reproductions, and line drawings is noteworthy. With these visual aids, the author has been able to reduce the amount of reading to a minimum. The general principles of therapy agree, in general, with present day teaching and are based on sound evidence. There are many conditions presented, the causes of which are not known. Etiological theories are given, however, and they should be a stimulus to the student for continued investigation. The author's enthusiasm for shoe supports for flat feet in infants, as well as shoeing and bracing for bowlegs, is not shared by many. The bibliography is adequate in some sections and deficient in others but, in general, is complete. The index and table of contents are easy to read and have satisfactory cross references.

This text complements other

available orthopedic books, particularly by its emphasis on the crippled child rather than on the adult. It is a worthwhile book to own and highly recommended for the library of anyone treating children.

Movement Fundamentals: Figure, Form, Fun. *By Janet A. Wessel, Ph.D., Department of Physical Education, Michigan State University. Paper; price $3.75. Pp. 270; illus. Prentice-Hall, Inc., New York, 1957.*

This is a workbook designed for use by college women in their physical education classes. It has been developed from the author's concept that an educated woman should be physically educated to an understanding of her physical self and of her exercise needs as related to her total life. In the author's words, the book has been written "for the woman who desires to improve or maintain her figure, and the form, efficiency and grace of her movement." To increase the appeal of the book for college women Dr. Wessel has made an intensely individual and personal approach, freely using self-rating charts and questionnaires to help the student discover, evaluate, and prescribe for her own movement needs. Numerous line and schematic drawings throughout the book both illustrate the text and stimulate reader interest.

The book is organized into five parts, of which the first, titled Your Fitness and Physical Potential, discusses a definition of fitness and the elements which contribute to it. The first of many checklists and self-rating scales, How Fit Are You?, brings the definition into close personal focus for the reader. The section then continues with a further general discussion of individual physical potential and the many factors which determine its extent—constitutional body build, posture, form, vitality, basic motor skills, and balanced living.

Part II, Inventory of Your Physical Potential, provides tests, self-rating scales, checklists, and forms for recording scores on objective and standardized tests, each leading the student toward an exhaustive self-analysis of her figure, vitality, and motor ability.

Part III discusses movement and its effect upon the body and its potentials. This leads naturally into a discussion of exercise and the part which it can play in correcting poor movement habits, restoring balance and agility, correcting figure faults, and contributing toward the optimum development of the student's total personality. Also included in this section are several series of exercises planned to accomplish specific objectives such as increasing muscle size, strength, and endurance; increasing flexibility; increasing general body endurance; releasing muscular tensions; achieving balanced postural lines; streamlining body contours; or developing basic motor skills.

On the basis of her previous self evaluation and analysis, the student is then led, in Part IV, to the development of a personalized program of activities, be it sports or exercise, designed to achieve full realization of her own physical potential, optimum figure proportions, increased vitality, and sufficient basic skill to enable her to enjoy participation in the sports of her choice.

The last section, You As A Spectator, recognizes the importance of the recreational values available to the intelligent and appreciative spectator. Short quizzes give the student an idea of how well she is informed concerning the major amateur and professional sports, ballet, and modern dance. Here the author includes sufficient historical background and information to provide the student with the fundamentals of these major sports and dance activities. A list of selected references encourages further reading on subjects of the student's choice.

Although written primarily as a workbook for college women the book can be adapted easily for use by high school seniors or by women's conditioning and figure control classes in such programs as the YWCA or other community sponsored agencies. To the physical therapist faced with motivation of corrective and postural exercises among teen-aged girls this book may offer valuable help.

Therapeutic Exercises for the Treatment of the Neurologically Disabled. *By Harold J. Brenner, M.S., Assistant Chief, Corrective Therapy Supervisor of the Neurological Service, Veterans Administration Hospital, Sepulveda, Calif. Cloth; price $3.50. Pp. 73; illus. Charles C Thomas, Springfield, Ill. 1957.*

This short monograph presents a corrective therapist's concept of therapeutic exercise and ambulation training in relation to hemiplegia, multiple sclerosis, parkinsonism, poliomyelitis, and polyneuritis. Throughout the book is evidenced a physical educator's approach to the dynamic correction of disease by exercise.

There is no reference to physiology of muscle or joints, methods of muscle hypertrophy, and only general statements about exercise technic. The author's summary remarks on objective and goals for the disease entities discussed are basically the same—through general exercise to achieve ambulation and maintain a high level of physical and mental activity.

This book adds nothing to the field of therapeutic exercise.

J.A.M.A. Clinical Abstracts of Diagnosis and Treatment. *By I. Phillips Frohman, M.D. Cloth; price $5.50. Pp. 564. Intercontinental Medical Book Corp., New York, 1957.*

The increasing number of medical journals being published has made it difficult, even for the specialist, to keep up with new developments in medicine. This has resulted in the creation of services which abstract either all or selected published articles so that the reader can "keep up with the literature in general" and also can select those articles of particular interest for more detailed examination. For over 50 years, the *Journal of the American Medical Association* has provided such an abstracting service. The editors of the *Journal* select articles from more than 1,200 leading medical periodicals published all over the world, condense them, and have them published in the section of the *Journal* entitled, "Medical Literature Abstracts."

From the abstracts that were published in 1956, Dr. Frohman has further selected those specifically related to diagnosis and treatment, organized them into organ systems and some diseases, and published them in this volume. The organ systems and diseases covered are as follows: digestive, respiratory, cardiovascular, urinary, reproductive, endocrine, bones, muscles, joints and connective tissue (one system), blood and lymphatics, skin, nervous system, eye, ear, nose and throat, poisoning, infections, and miscellaneous diagnosis and treatment.

This reviewer has been a faithful reader of the abstracts as they have appeared in the J.A.M.A. He has always found these abstracts to be useful, and of high quality. They are well written and cover the essential points presented in the article. However, a major problem in such a service is the question of selection. The reader of the J.A.M.A. is immediately limited to those articles selected by the editors, and the reader of this volume is limited again to a second selection made by Dr. Frohman. Consequently, the usefulness of the abstracts in providing an over-all view of the published literature is diminished to the extent that a reader does not agree with the editors with regard to the relative importance of a published article. Nonetheless, this volume has a certain utility in providing a somewhat broader range of reading material to the average reader. The subjects are well indexed, providing ready reference to to the contents.

Proceedings of the Second Institute on Rehabilitation Centers. *By National Society for Crippled Children and Adults. Paper; price $1.00. Pp. 29. National Society for Crippled Children and Adults, Chicago, 1956.*

This book consists of a series of articles written by prominent members in the field of rehabilitation. Their contributions provide information pertinent to the over-all concept of rehabilitation and will prove helpful in stimulating our thinking toward the future of this field. The articles merit special praise for their comprehensive approach and will be useful in understanding current concepts in present day rehabilitation centers, facilities available, and information regarding treatment of the handicapped within the confines of one institution.

There are excellent reviews of the roles of the various members of the rehabilitation team. Heretofore, the psychological aspects of patient-centered rehabilitation have not received much consideration, however, recently the importance of psychological guidance has been receiving greater emphasis. Psychological consultations are important not only in providing information which would not ordinarily be available to the various rehabilitation disciplines, but also aid the staff of the rehabilitation center to gain insight into the selection of the most appropriate therapeutic regime for a particular patient. Ideally the social worker provides understanding basic to the working relationship between the patient and the various rehabilitation disciplines. The services of a vocational counsellor are an essential part of the total rehabilitation program so that the detailed planning of a vocation taking into consideration the patient's intellectual, functional and physical capabilities can be assured. Patient-centered, rather than job-centered, training for employment should be stressed. Besides providing physical activities, the occupational therapy department provides the social opportunity which is helpful in the patient's early prevocational evaluation—his degree of acceptance by others, his motivation and his general behavior.

There is a discussion of the role of the sheltered workshop in the rehabilitation program. Basically there are three types of workshop situations: (1) those where products are created and merchandised, (2) those which do salvage and repair, and (3) those which do industrial subcontract work. When such a workshop is being set up, industrial help should be secured to give job-centered training which will be utilized in the workshop situation and then afterward carried on into competitive employment. In order that the sheltered workshop market products at prevailing rates, profits must be commensurate with those established by business and industry even though the rates of productions must be permitted to fluctuate within the workers' abilities. The supervisor of the workshop should be a trained foreman or supervisor with experience in industry and should also be educated in the philosophy of rehabilitation and be trained to appreciate the workers' abilities and capacities. But as one author states "the final sheltered workshop product is the man" and there is danger of overemphasis of job opportunities.

The role of the Office of Vocational Rehabilitation and its legislative planning for rehabilitation is examined. Providing adequate community-centered, comprehensive rehabilitation facilities where they are most needed has been the goal of the Office of Vocational Rehabilitation and this has necessitated state surveys of existing facilities. Suggestions are made regarding applications for federal funds for rehabilitation. Inadequate medical supervision and lack of prevocational testing and working space have been cited as drawbacks in current programs. These problems must be solved before maximum rehabilitation can be accomplished.

If a worthwhile rehabilitation philosophy is to be promoted, sound information regarding rehabilitation must be imparted to society by every feasible means of communication. Orientation regarding the needs of the handicapped and subsequent action can reduce the cost of chronic illness, both to the individual and to the nation's economy. If we, as physical therapists, diligently participate to the fullest extent of our abilities as directed by the papers in this book, we can add purposeful life to what otherwise would be complete dependency.

The reviews here published have been prepared by competent authorities and do not represent the opinions of the American Physical Therapy Association.

Our Book Reviewers for March

Miriam L. Bender, Major (MSpC) USAF, Chief, Physical Therapy, 3201st USAF Hospital, Eglin Air Force Base, Florida.

J. Leonard Goldner, M.D., Assistant Professor of Orthopaedic Surgery, Duke University School of Medicine, Durham, North Carolina.

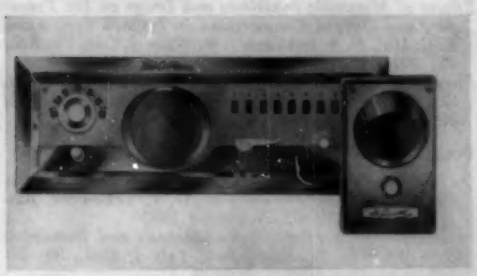
James Herrington, Chief Physical Therapist, Harmarville Rehabilitation Center, Pittsburgh.

Abraham Lilienfeld, M.D., Chief, Department of Statistics and Epidemiology, Roswell Park Memorial Institute, Buffalo.

Herbert W. Park, M.D., Professor of Physical Medicine and Rehabilitation, Medical College of Virginia, Richmond.

What's New . . . . . .

30. Home Intercom-Radio



Home intercom-radio system, fully transistorized, consumes less electricity than even one kitchen clock. The system uses no tubes, emits no heat, and the transistor circuit will last indefinitely, providing exceptionally dependable and economical performance.

Designed for safer, more comfortable and more enjoyable living, the system brings complete intercommunication as well as radio all through the house. Conversations can be held between rooms; baby, children, or sick room can be listened to; and favorite radio programs follow the listener throughout the house. The units can be flush-mounted or surface-mounted, thus making the system adaptable for homes already constructed, as well as for new construction. Talk-A-Phone Co.

31. Handbook for One-Handers

Handbook for One-Handers by Aaron Danzig is amply illustrated with pen and ink sketches. Detailed instructions on dressing and undressing, personal care, preparing meals, eating, household hints, sports, business, social life, love and marriage are included. Useful as a supplementary piece of information for the handicapped and professional staff. Federation of the Handicapped.

For more information on items write to The Physical Therapy Review, 1790 Broadway, New York 19, N. Y.

New items which may be of interest to physical therapists will be mentioned in these pages each month. The accompanying explanations are made by the manufacturers and have not been investigated by the *Physical Therapy Review*.

32. Air Jet Whirlpool Bath

Air Jet Whirlpool Bath, according to the manufacturer, is an efficient low cost unit for home use. Constructed of 14 gauge aluminum, the bath is portable and requires no plumbing installation. Since there is no electric motor, the danger of shock is eliminated. The Venturi Tube injects air bubbles into the hot water enabling the user to tolerate temperatures in excess of those normally tenable. Dimensions: Oval shape —17 inches by 14 inches at top; 10 inches deep. Flat bottom, 14 inches diameter with four legs, each ½ inch. Self Ease Units, Inc.

Index to Current Literature

(continued from page 184)

NEUROANATOMY

Neuro-Ophthalmology. Donald J. Lyle, A. M. A. Arch. Ophthal., 58: 758-774, November 1957

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Coming Meetings

March 11	National Multiple Sclerosis Society, NMSS Headquarters, New York
March 18-20	National Health Council, National Health Forum and 38th Annual Meeting, Sheraton Hotel, Philadelphia
March 24-26	Midwest Hospital Association, Municipal Auditorium, Kansas City, Mo.
March 24-26	New England Hospital Assembly, Hotel Statler, Boston
April 8-12	International Convention of International Council for Exceptional Children, Hotel Muehlebach, Kansas City, Mo.
April 8-12	Industrial Health Conference, Atlantic City

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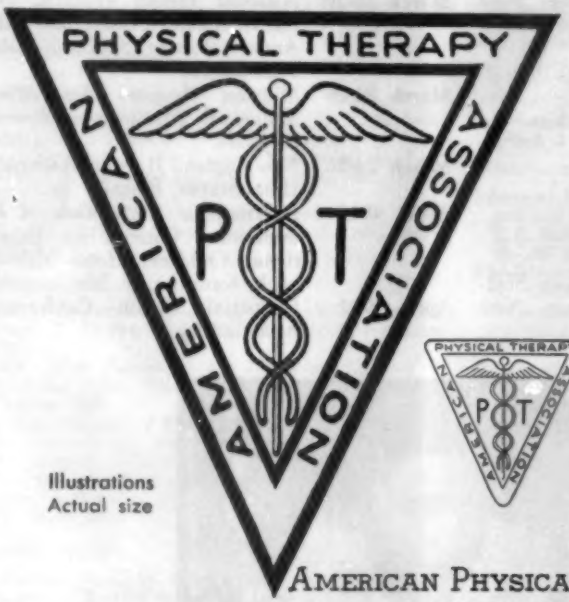

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(continued on next page)

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